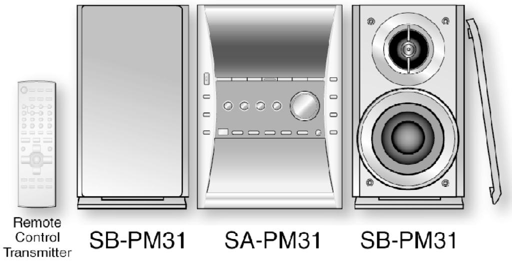
ORDER NO. MD0501011C2

## CD Stereo System

# SA-PM31E / SA-PM31EB / SA-PM31EG

Colour
(S)... Silver Type


Remote
Control
Transmitter
SB-PM31
SA-PM31
SB-PM31

## SPECIFICATIONS

### Specification

**■ Amplifier Section**

| | |
|---|---|
| RMS power output | |
| 10% Total harmonic distortion | |
| 1 kHz, both channels driven | |
| (Low channel) | 41 W per channel (6 Ω) |
| 8 kHz, both channels driven | |
| (High channel) | 39 W per channel (6 Ω) |
| Total Bi-Amp power | 80 W per channel |
| Output Impedance | |
| Headphone | 16 Ω - 32 Ω |

**■ FM Tuner Section**

| | |
|---|---|
| Frequency range | 87.50 MHz - 108.00 MHz / (50 kHz steps) |
| Sensitivity | 1.02 μ V (IHF) |
| S/N 26 dB | 1.00 μ V |
| Antenna terminal(s) | 75 Ω (unbalanced) |

**■ AM Tuner Section**

| | |
|---|---|
| Frequency range | 522 kHz - 1629 kHz (9 kHz steps)<br>520 kHz - 1630 kHz (10 kHz steps) |
| Sensitivity | |
| S/N 20 dB (at 999 kHz) | 900 μ V/m |

**■ Cassette Deck Section**

| | |
|---|---|
| Track system | 4 track, 2 channel |
| Heads | |
| Record/playback | Solid permalloy head |
| Erasure | Double gap ferrite head |
| Motor | DC servo motor |
| Recording system | AC bias 100 kHz |
| Erasing system | AC erase 100 kHz |
| Tape speed | 4.8 cm/s |
| Overall frequency response (+3 dB, -6 dB at DECK OUT) | |
| NORMAL | 35 Hz - 14 kHz |
| S/N RATIO | 42.64 dB (A weighted) |
| Wow and flutter | 0.08% (WRMS) |
| Fast forward and rewind time | Approx. 120 seconds with C-60 cassette tape |

**■ CD Section**

| | |
|---|---|
| Disc | |
| CD, CD-R, CD-RW, MP3 | 8 cm/12 cm |

| | |
|---|---|
| Sampling frequency | 44.1 kHz |
| Decoding | 16/20/24 bit linear |
| Beam source/wavelength | Semiconductor laser / 780 nm |
| Number of channels | Stereo |
| Frequency response | 20 Hz - 20 kHz (+1dB, -2dB) |
| Wow and flutter | Below measurable limit |
| Digital filter | 8 fs |
| D/A converter | MASH (1 bit DAC) |
| MP3 | |
| Bit rate | 32 kbps - 320 kbps |
| Sampling frequency | 32 kHz, 44.1 kHz, 48 kHz |

**■ General**

| | |
|---|---|
| Power supply | AC 230 V, 50 Hz (E/EG)<br>AC 230 - 240 V, 50 Hz (EB) |
| Power consumption | 130 W |
| Dimensions (W x H x D) | 175 mm x 254 mm x 390.7 mm |
| Mass | 5.63 kg |
| Power consumption in standby mode: | 0.6 W |

| | |
|---|---|
| ■ System: SC-PM31E-S | Music Center: SA-PM31E-S<br>Front speaker: SB-PM31E-M |
| ■ System: SC-PM31EB-S | Music Center: SA-PM31EB-S<br>Front speaker: SB-PM31E-M |
| ■ System: SC-PM31EG-S | Music Center: SA-PM31EG-S<br>Front speaker: SB-PM31E-M |

**Notes:**

1. Specifications are subject to change without notice. / Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. The labels “HIGH” and “LOW” on the rear of the speakers refer to High frequency and Low frequency.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

# 1. Safety Cautions

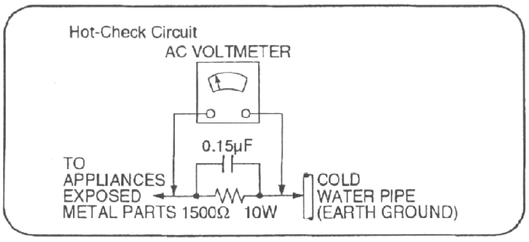
## 1.1. GENERAL GUIDELINES

1. **When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.**
2. **After servicing, ensure that all the protective devices such as insulation barriers, insulation papers shields are properly installed.**
3. **After servicing, check for leakage current checks to prevent from being exposed to shock hazards.**

### 1.1.1. LEAKAGE CURRENT COLD CHECK

1. **Unplug the AC cord and connect a jumper between the two prongs on the plug.**
2. **Using an ohmmeter measure the resistance value, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M Ω and 5.2 Ω . / When the exposed metal does not have a return path to the chassis, the reading must be ∞ .**

**Fig. 1**



### 1.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. **Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.**
2. **Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.**
3. **Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.**

4. **Check each exposed metallic part, and measure the voltage at each point.**
5. **Reverse the AC plug in the AC outlet and repeat each of the above measurements.**
6. **The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. Should the measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and re-checked before it is returned to the customer.**

## 2. Caution for AC Mains Lead

# (For United Kingdom)

## (“EB” area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ◈ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

**CAUTION!**
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.
If in any doubt please consult a qualified electrician.

**IMPORTANT**
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.
**WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.**

**THIS PLUG IS NOT WATERPROOF—KEEP DRY.**

**Before use**

Remove the connector cover.

**How to replace the fuse**

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

**Figure A**

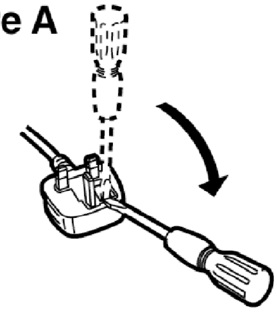
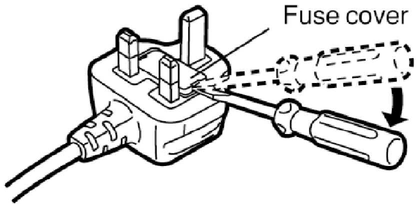


**Figure B**



2. Replace the fuse and close or attach the fuse cover.

**Figure A**

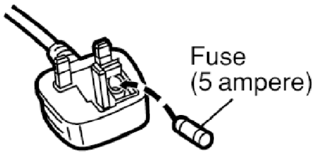
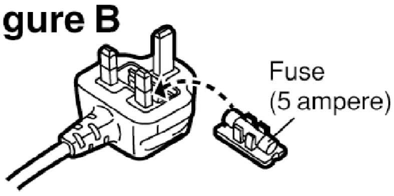


**Figure B**



## 3. Before Repair and Adjustment

**Disconnect AC power, discharge Power Supply Capacitors C506, C507, C508, C600, C601, C602, C620 through a 10 Ω , 1W resistor to ground.**

**DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.**

**After repairs are completed, restore power gradually using a variac, to avoid overcurrent.**

- **Current consumption at AC 230V, 50 Hz in NO SIGNAL mode (volume min) should be ~300 mA (E/EG).**
- **Current consumption at AC 230-240V, 50 Hz in NO SIGNAL mode (volume min) should be ~300 mA (EB).**

## 4. Protection Circuitry

**The protection circuitry may have operated if either of the following conditions are noticed:**

- **No sound is heard when the power is turned on.**
- **Sound stops during a performance.**

**The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less**

**than the indicated rated impedance of the amplifier are used.**
**If this occurs, follow the procedure outlines below:**

1. **Turn off the power.**
2. **Determine the cause of the problem and correct it.**
3. **Turn on the power once again after one minute.**

**Note:**
**When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.**

# 5. Handling the Lead-free Solder

## 5.1. About lead free solder (PbF)

**Distinction of PbF P.C.B.:**
**P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.**
**Caution:**

- **Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).**
- **Pb free solder will tend to splash when heated too high (about 1100°F/600°C).**
- **When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.**

# 6. Precaution of Laser Diode

**Caution :**

**This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens. / Wavelength : 780 nm / Maximum output radiation power from pick up : 100 μ W/VDE / Laser radiation from pick up unit is safety level, but be sure the followings:**

1. **Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick up unit. It was already adjusted.**
3. **Do not look at the focus lens using optical instruments.**
4. **Recommend not to look at pick up lens for a long time.**

**ACHTUNG :**

**Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt. / Wellenlänge : 780nm / Maximale Strahlungsleistung der Lasereinheit :100 μ W/VDE / Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:**

1. **Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.**
2. **Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.**
3. **Nicht mit optischen Instrumenten in die Fokussierlinse blicken.**
4. **Nicht über längere Zeit in die Fokussierlinse blicken.**

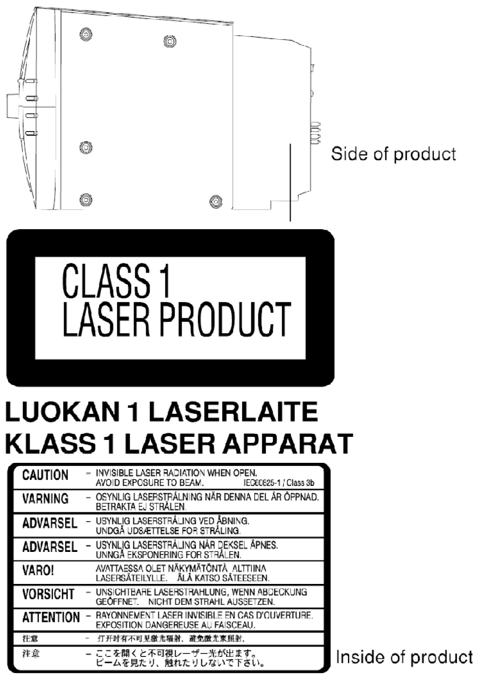
**ADVARSEL :**

**I dette a apparat anvendes laser.**

**CAUTION!**

**THIS PRODUCT UTILIZES A LASER.**
**USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN TH**
**SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.**

**■ Use of Caution Labels**


Side of product
CLASS 1
LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
CAUTION - INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. IEC60825-1 / Class 3b
VARNING - OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL - USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
ADVARSEL - USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARO! AVATTAESSA OLET NÄKYMÄTÖNTÄ ALTTIINA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
注意 - 打开时有不可见激光辐射，避免激光束照射。
注意 - ここを開くと不可視レーザー光が出ます。ビームを見たり、触れたりしないで下さい。
Inside of product

# 7. Handling Precautions For Traverse Deck

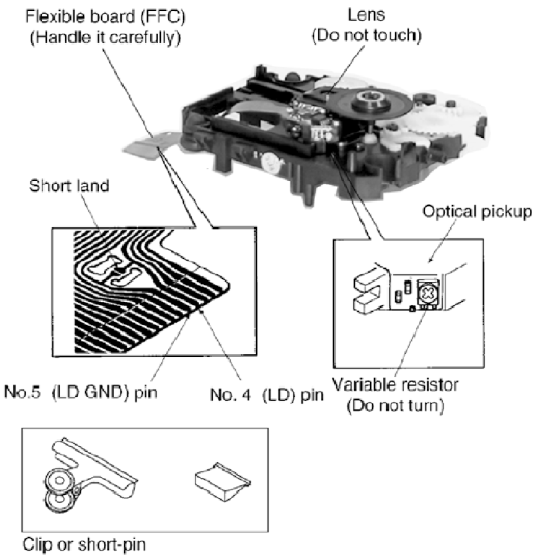
**The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.**

**So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).**

● **Handling of CD traverse deck (optical pickup)**

1. **Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.**
2. **The short land between the No.4 (LD) and No.5 (GND) pins on the flexible board (FFC) is shorted with a solder build-up to prevent damage to the laser diode (Fig 1).**
3. **Take care not to apply excessive stress to the flexible board (FPC board).**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted.**

**Fig 1**


Flexible board (FFC)
(Handle it carefully)
Lens
(Do not touch)
Short land
Optical pickup
No.5 (LD GND) pin
No. 4 (LD) pin
Variable resistor
(Do not turn)
Clip or short-pin

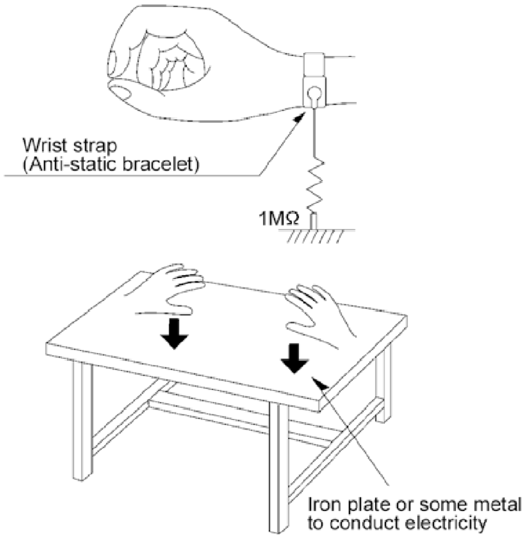
● **Grounding for electrostatic breakdown prevention**

1. **Human body grounding (Fig 2)**
   **Use the anti-static wrist strap to discharge the static electricity from your body.**
2. **Work table grounding (Fig 2)**
   **Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.**

**Caution :**

**The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).**

**Fig 2**


Wrist strap
(Anti-static bracelet)
1MΩ
Iron plate or some metal
to conduct electricity

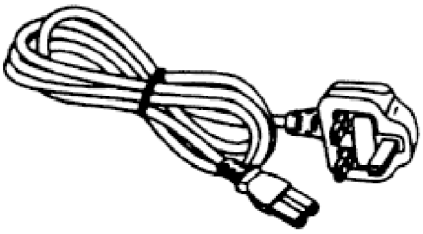
**Caution when Replacing the Optical Pickup :**

**The traverse has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.**

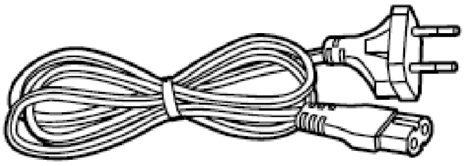
# 8. Accessories

**Note : Refer to Packaging Materials & Accessories for the part number.**

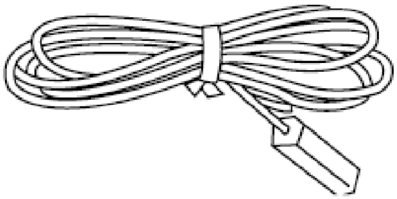
**AC cord (EB)**



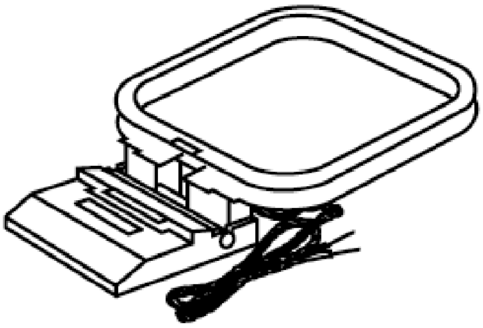
**AC cord (E/EG)**



**FM antenna**

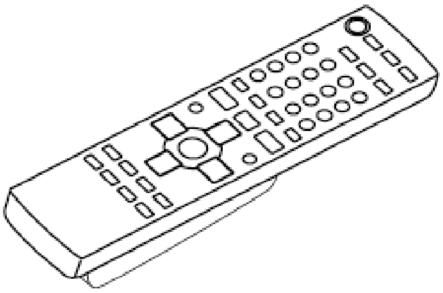


AM loop antenna



Antenna plug adaptor

Remote control



# 9. Operating Procedures

# 10. Information on Disc and MP3

# 11. Assembling and Disassembling

**“ATTENTION SERVICER”**

**Some chassis components may be have sharp edges. Be careful when disassembly and servicing.**

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. / Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**

**Warning:**

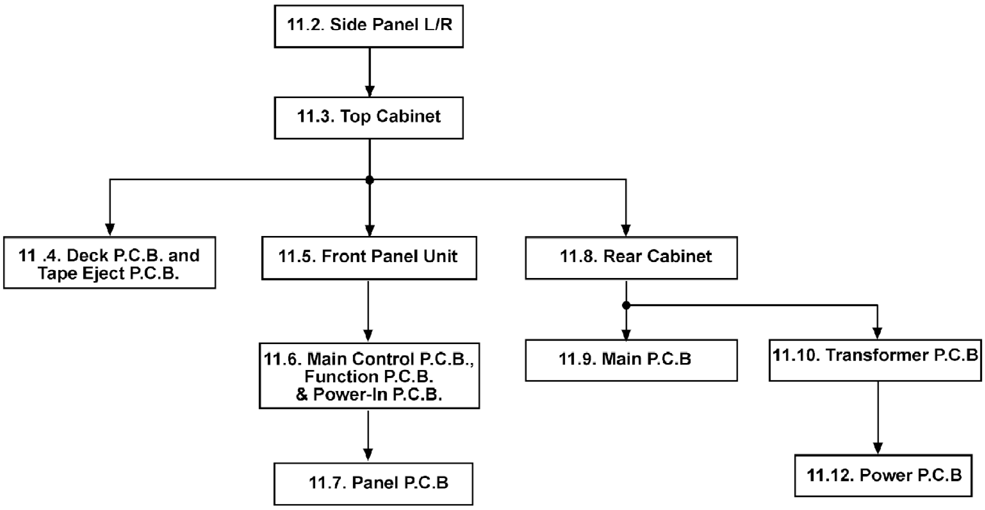
**This product uses a laser diode. Refer to “Precaution of Laser Diode”.**

**ACHTUNG:**

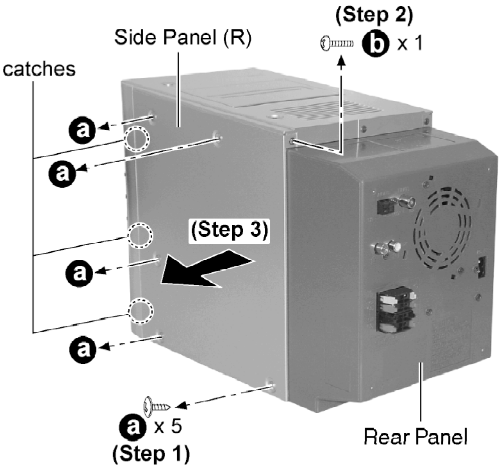
**Die Lasereinheit nicht zerlegen. / Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.**

## 11.1. Disassembly flow chart

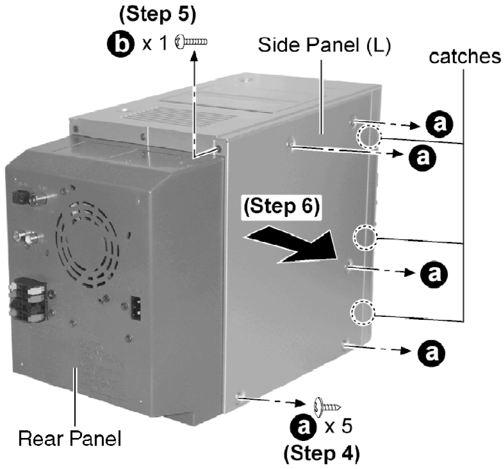
**The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.**
**To assemble the unit, reverse the steps shown in the chart below.**


11.2. Side Panel L/R
11.3. Top Cabinet
11 .4. Deck P.C.B. and Tape Eject P.C.B.
11.5. Front Panel Unit
11.8. Rear Cabinet
11.6. Main Control P.C.B., Function P.C.B. & Power-In P.C.B.
11.9. Main P.C.B
11.10. Transformer P.C.B
11.7. Panel P.C.B
11.12. Power P.C.B

## 11.2. Disassembly of Side Panel L & R


(Step 2)
b x 1
Side Panel (R)
catches
a
a
(Step 3)
a
a
a x 5
(Step 1)
Rear Panel

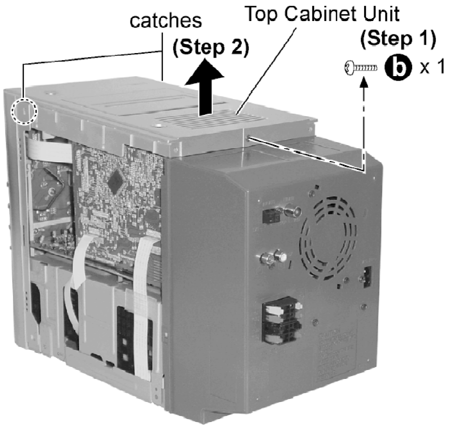
**Step 1 : Remove 5 screws.**
**Step 2 : Remove 1 screw.**
**Step 3 : Remove the side panel as arrow shown (Be careful of the catches).**


(Step 5)
b x 1
Side Panel (L)
catches
a
a
(Step 6)
a
a
Rear Panel
a x 5
(Step 4)

**Step 4 : Remove 5 screws.**
**Step 5 : Remove 1 screw.**
**Step 6 : Remove the side panel as arrow shown (Be careful of the catches).**

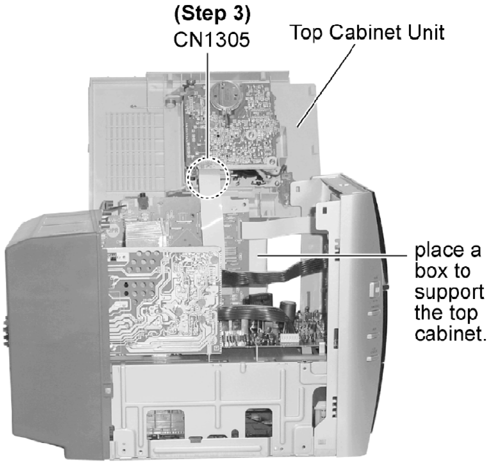
## 11.3. Disassembly of Top Cabinet Unit

**- Follow the (Step 1) - (Step 6) of Item 11.2.**


catches
Top Cabinet Unit
(Step 2)
(Step 1)
b x 1

**Step 1 : Remove 1 screw.**

**Step 2 : Lift up the top cabinet as arrow shown (Be careful of the catches).**

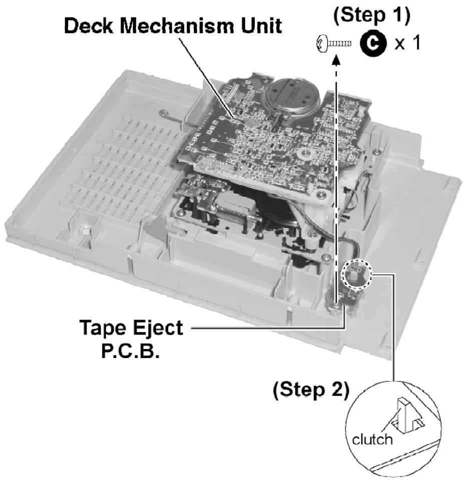

(Step 3)
CN1305
Top Cabinet Unit
place a box to support the top cabinet.

**Step 3 : Place the top cabinet as shown and detach connector CN1305.**

## 11.4. Disassembly of Deck P.C.B. and Tape Eject P.C.B.

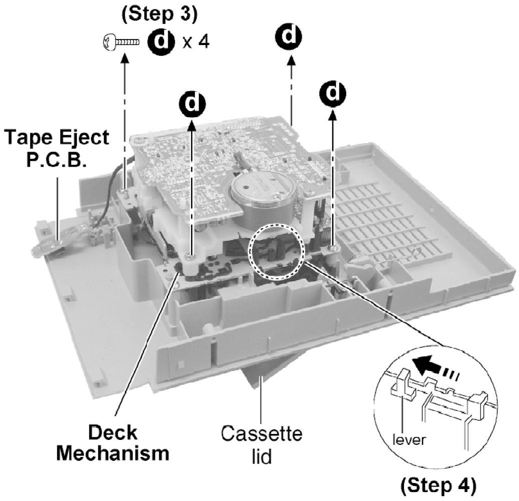
**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**


Deck Mechanism Unit
(Step 1)
c x 1
Tape Eject
P.C.B.
(Step 2)
clutch

**Step 1 : Remove 1 screw.**

**Step 2 : Release the clutch.**


(Step 3)
d x 4
d
d
d
Tape Eject
P.C.B.
Deck
Mechanism
Cassette
lid
lever
(Step 4)

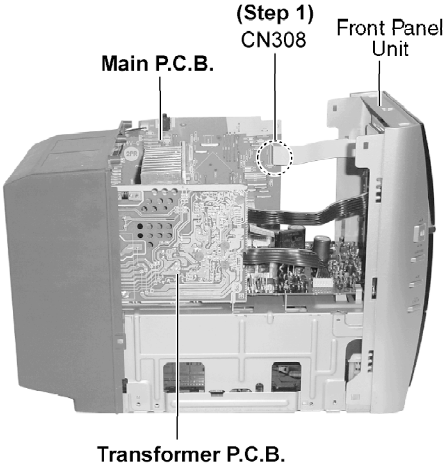
**Step 3 : Remove 4 screws.**

**Step 4 : Push the lever as arrow shown to open the cassette lid and remove the Deck Mechanism Unit.**

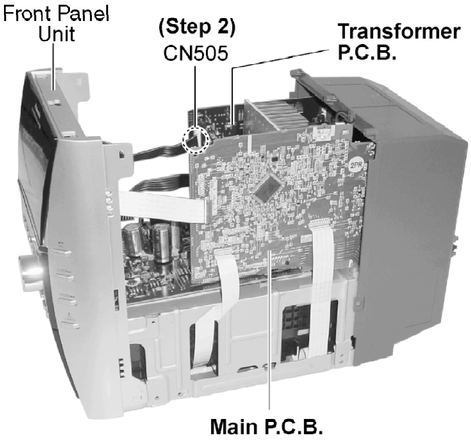
## 11.5. Disassembly of Front Panel Unit

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

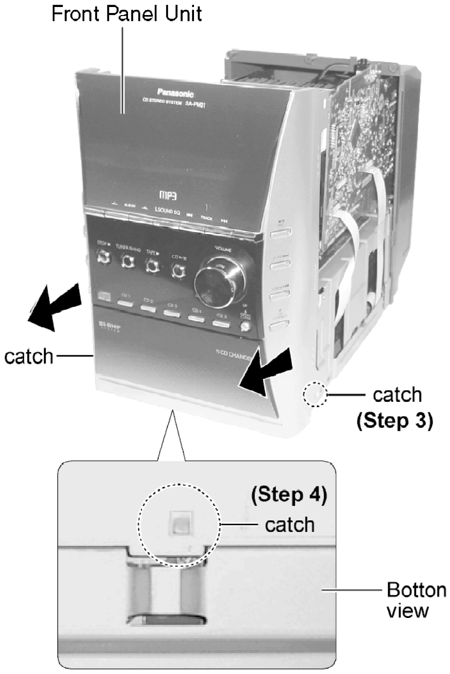
**- Follow the (Step 1) - (Step 3) of Item 11.3.**


(Step 1)
CN308
Front Panel Unit
Main P.C.B.
Transformer P.C.B.

**Step 1 : Detach the connector CN308.**


Front Panel Unit
(Step 2)
CN505
Transformer P.C.B.
Main P.C.B.

**Step 2 : Detach the connector CN505.**


Front Panel Unit
catch
catch
(Step 3)
(Step 4)
catch
Botton
view

**Step 3 : Release 2 catches.**

**Step 4 : Release the catch at the bottom cabinet and remove the front panel unit as arrows shown.**

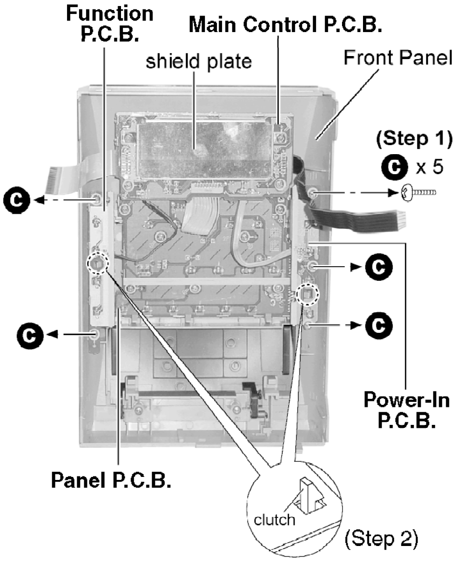
## 11.6. Disassembly of Main Control P.C.B., Function P.C.B. and Power -In P.C.B.

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

**- Follow the (Step 1) - (Step 4) of Item 11.5.**

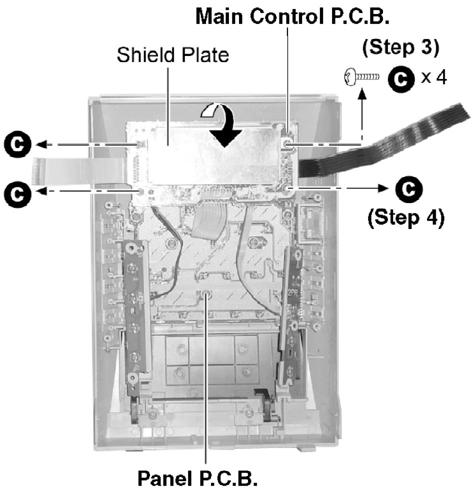
**- Disassembly of Function P.C.B. and Power-In P.C.B.**


Function
P.C.B.
Main Control P.C.B.
shield plate
Front Panel
(Step 1)
C x 5
C
C
C
C
Power-In
P.C.B.
Panel P.C.B.
clutch
(Step 2)

**Step 1 : Remove 5 screws.**

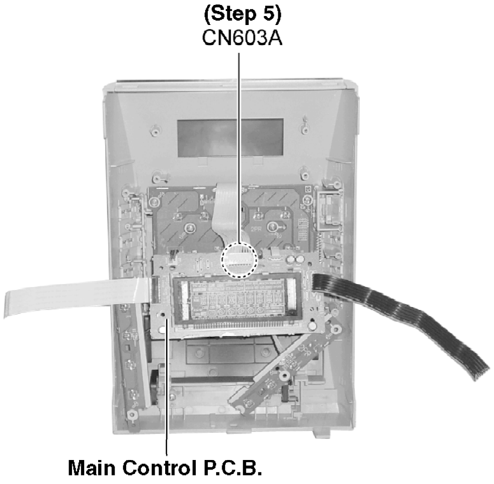
**Step 2 : Release 2 clutches and remove both Function P.C.B. and Power-In P.C.B.**

## - Disassembly of Main Control P.C.B.


Main Control P.C.B.
Shield Plate
(Step 3)
C x 4
C
C
C
(Step 4)
Panel P.C.B.

**Step 3 : Remove 2 screws to remove the shield plate.**

**Step 4 : Remove 2 screws and flip the Main Control P.C.B. as arrow shown.**


(Step 5)
CN603A
Main Control P.C.B.

**Step 5 : Detach the connector CN603A.**

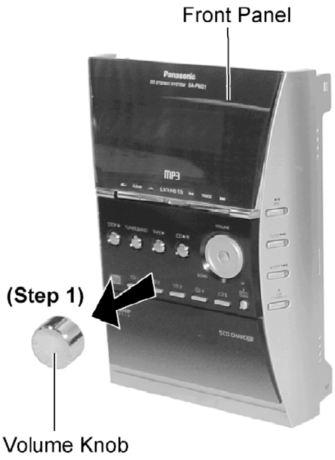
## 11.7. Disassembly of Panel P.C.B.

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

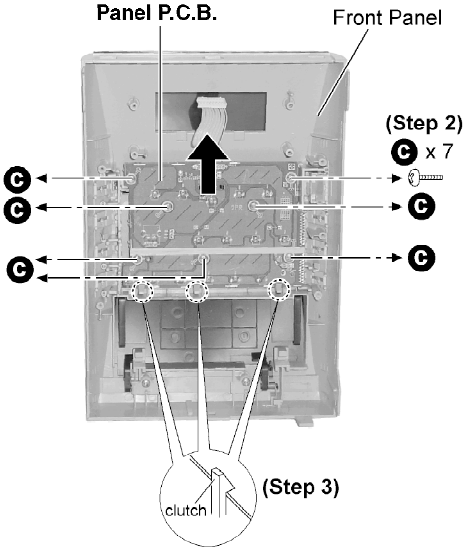
**- Follow the (Step 1) - (Step 3) of Item 11.3.**

**- Follow the (Step 1) - (Step 4) of Item 11.5.**

**- Follow the (Step 1) - (Step 5) of Item 11.6.**


Front Panel
(Step 1)
Volume Knob

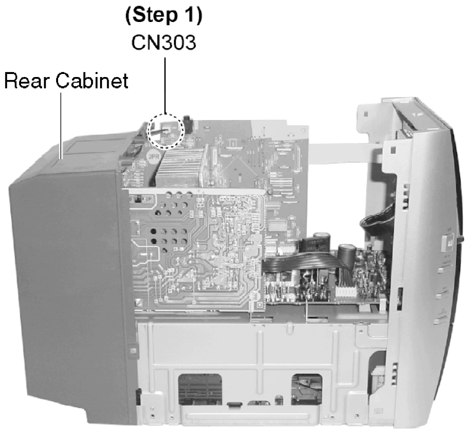
**Step 1 : Remove the volume knob.**


Panel P.C.B.
Front Panel
(Step 2)
C x 7
C
C
C
C
C
(Step 3)
clutch

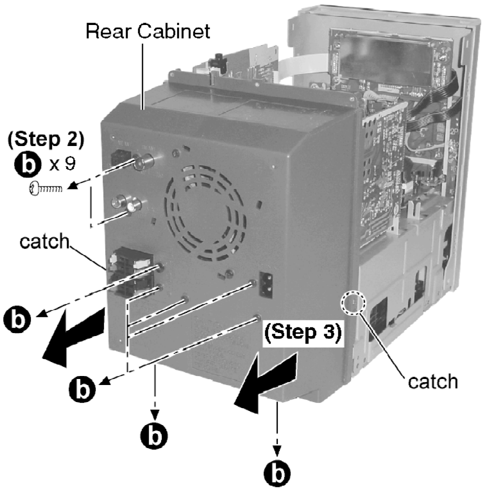
**Step 2 : Remove 7 screws.**
**Step 3 : Release 3 clutches and remove the Panel P.C.B. as arrow shown.**

## 11.8. Disassembly of Rear Cabinet

**- Follow the (Step 1) - (Step 6) of Item 11.2.**
**- Follow the (Step 1) - (Step 3) of Item 11.3.**


(Step 1)
CN303
Rear Cabinet

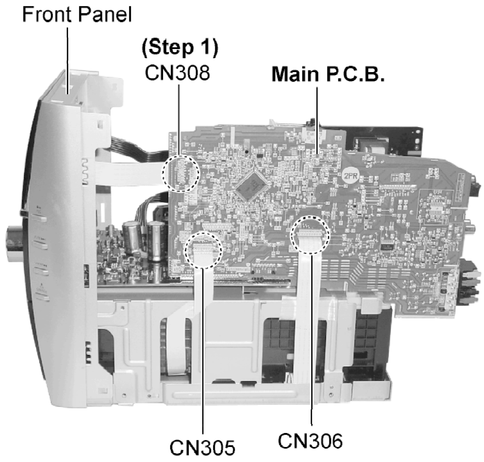
**Step 1 : Detach the connector CN303.**


Rear Cabinet
(Step 2)
b x 9
catch
b
b
b
b
(Step 3)
catch

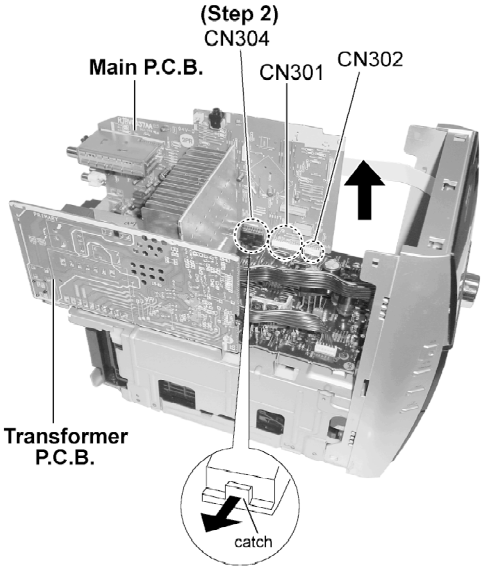
**Step 2 : Remove 9 screws.**
**Step 3: Remove the rear cabinet as arrows shown (Be careful of the catches).**

## 11.9. Disassembly of Main P.C.B.

**- Follow the (Step 1) - (Step 6) of Item 11.2.**
**- Follow the (Step 1) - (Step 3) of Item 11.3.**
**- Follow the (Step 1) - (Step 3) of Item 11.8.**


Front Panel
(Step 1)
CN308
Main P.C.B.
CN305
CN306

**Step 1 : Detach connectors CN308, CN305 and CN306 .**


(Step 2)
CN304
Main P.C.B.
CN301
CN302
Transformer
P.C.B.
catch

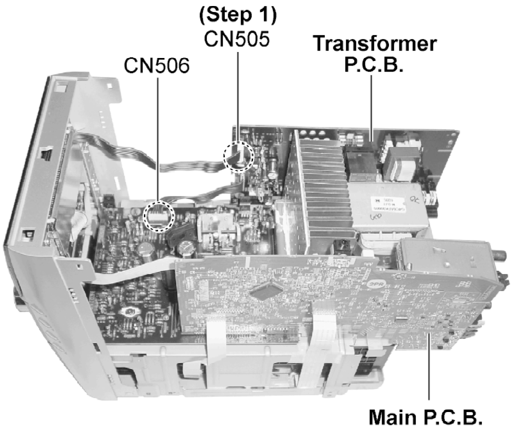
**Step 2 : Detach the connectors CN304 (pull the catch as arrow shown), CN301 and CN302 and pull out the Main P.C.B as arrow shown.**

## 11.10. Disassembly of Transformer P.C.B.

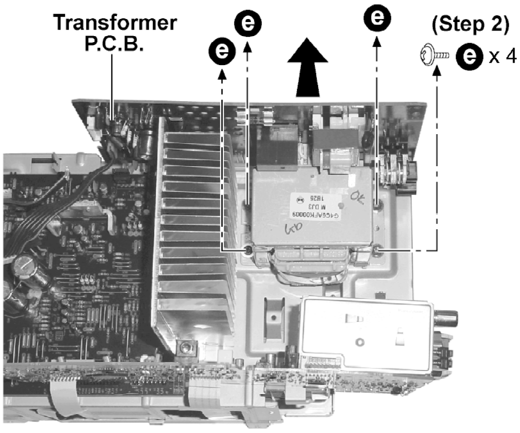
**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

**- Follow the (Step 1) - (Step 3) of Item 11.8.**


(Step 1)
CN505
CN506
Transformer P.C.B.
Main P.C.B.

**Step 1 : Detach the connectors CN505 and CN506.**


Transformer P.C.B.
ⓔ
ⓔ
ⓔ
(Step 2)
ⓔ x 4
Y4Y
OK
G4BA/H0000S
1828
M0

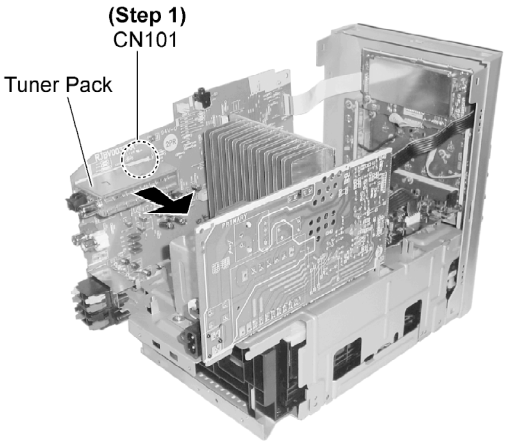
**Step 2 : Remove 4 screws and pull out the Transformer P.C.B. as arrow shown.**

## 11.11. Disassembly of Tuner Pack

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

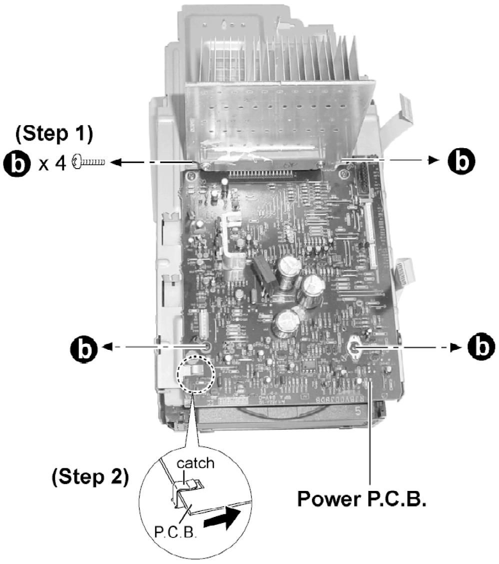
**- Follow the (Step 1) - (Step 3) of Item 11.8.**


(Step 1)
CN101
Tuner Pack

**Step 1 : Detach the connector CN101 and remove the tuner pack as arrow shown.**

## 11.12. Disassembly of Power P.C.B

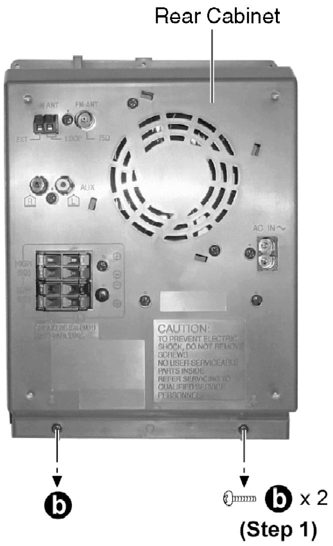
- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.
- Follow the (Step 1) - (Step 3) of Item 11.8.
- Follow the (Step 1) - (Step 2) of Item 11.9.
- Follow the (Step 1) - (Step 2) of Item 11.10.



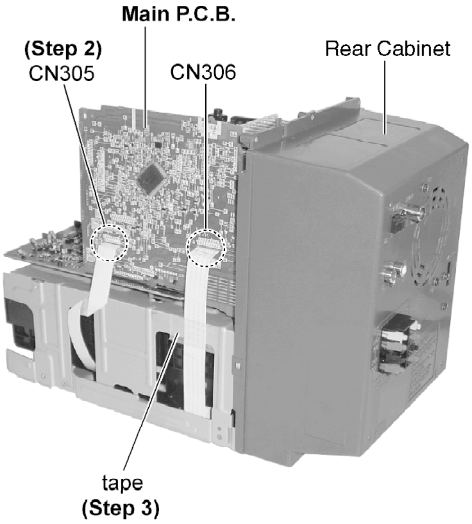
**Step 1 : Remove 4 screws.**
**Step 2 : Remove the Power P.C.B. as arrow shown (be careful of the catch).**

## 11.13. Disassembly of CR16 Mechanism

- Follow the (Step 1) - (Step 6) of Item 11.2.
- Follow the (Step 1) - (Step 3) of Item 11.3.
- Follow the (Step 1) - (Step 4) of Item 11.5.

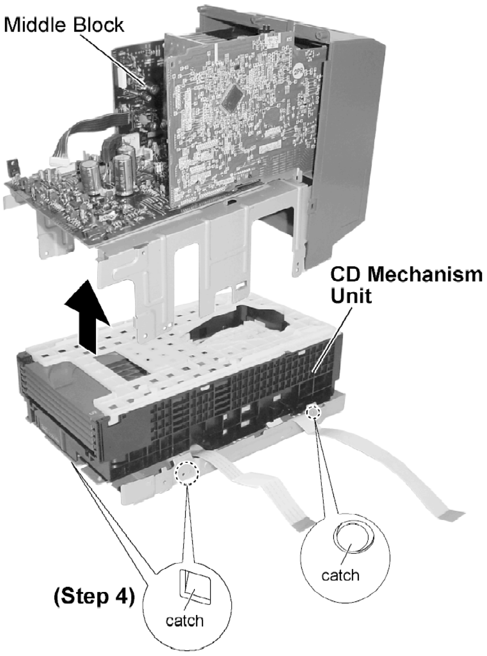

Rear Cabinet
b
b x 2
(Step 1)

**Step 1 : Remove 2 screws.**

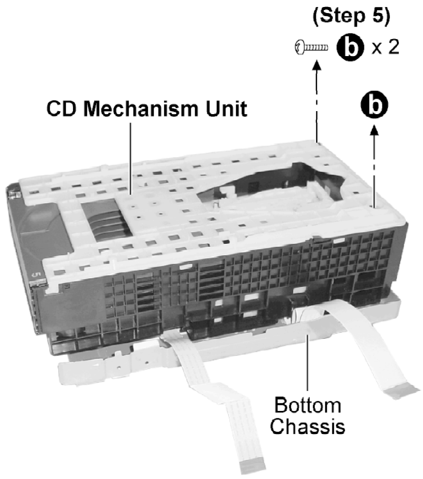

Main P.C.B.
(Step 2)
CN305
CN306
Rear Cabinet
tape
(Step 3)

**Step 2 : Detach the connectors CN305 and CN306.**

**Step 3 : Remove the tape which used to secure the FFC connectors.**


Middle Block
CD Mechanism Unit
(Step 4)
catch
catch

**Step 4 : Release the catches and remove the middle block as arrow shown.**


(Step 5)
b x 2
CD Mechanism Unit
b
Bottom Chassis

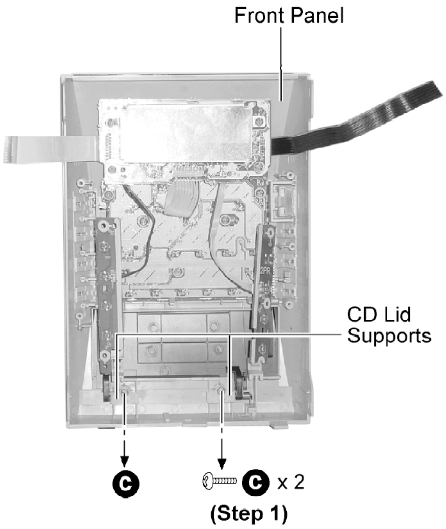
**Step 5 : Remove 2 screws and remove the CD Mechanism Unit from the bottom chassis.**

## 11.14. Replacement of CD Lid

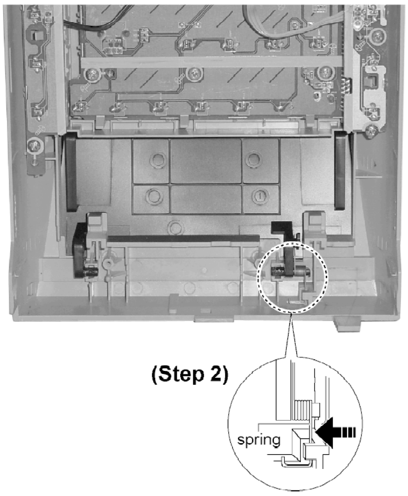
**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

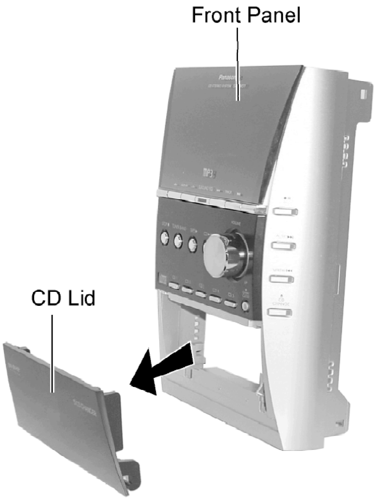
**- Follow the (Step 1) - (Step 4) of Item 11.5.**


Front Panel
CD Lid
Supports
C
C x 2
(Step 1)

**Step 1 : Remove 2 screws and the 2 CD lid supports.**


(Step 2)
spring

**Step 2 : Push the spring as arrow shown.**


Front Panel
CD Lid

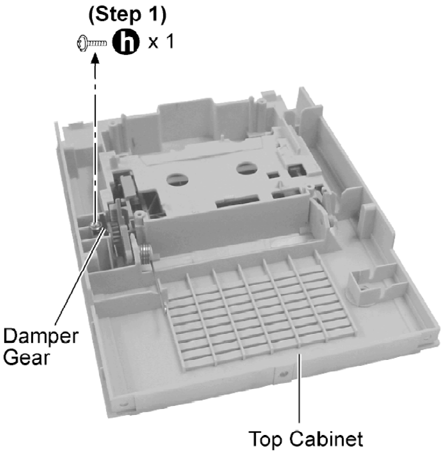
**Step 3 : Remove the CD lid as arrow shown.**

## 11.15. Replacement of Cassette Lid

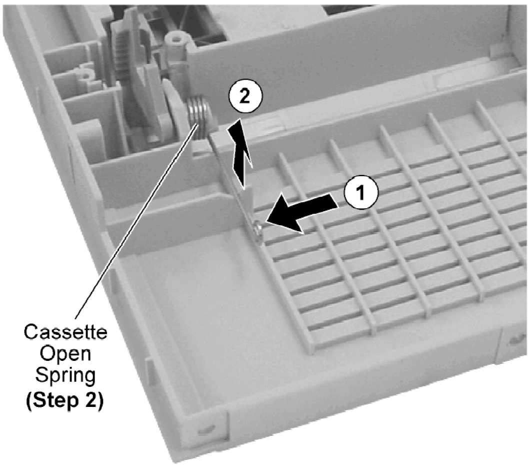
**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

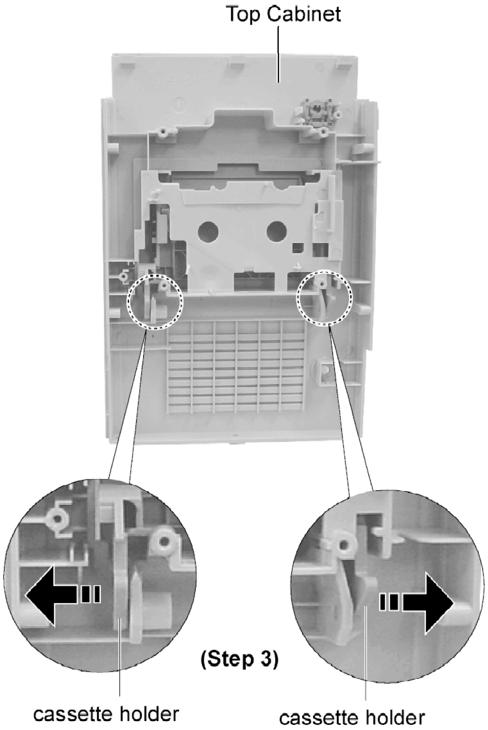
**- Follow the (Step 1) - (Step 4) of Item 11.4.**


(Step 1)
h x 1
Damper Gear
Top Cabinet

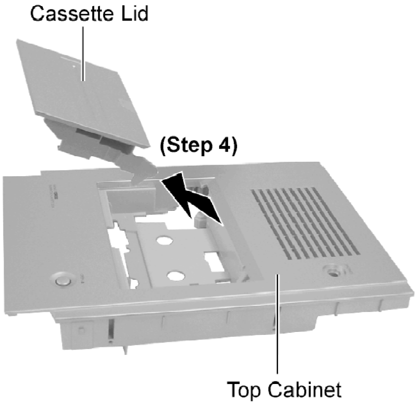
**Step 1 : Remove 1 screw and the damper gear.**


2
1
Cassette Open Spring
(Step 2)

**Step 2 : Remove the cassette open spring as arrows shown in order.**


Top Cabinet
(Step 3)
cassette holder
cassette holder

**Step 3 : Pull both sides' cassette holders to the direction of the arrows shown.**


Cassette Lid
(Step 4)
Top Cabinet

**Step 4 : Remove the cassette lid as arrow shown.**

## 11.16. Replacement of the Power IC and Transistors.

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

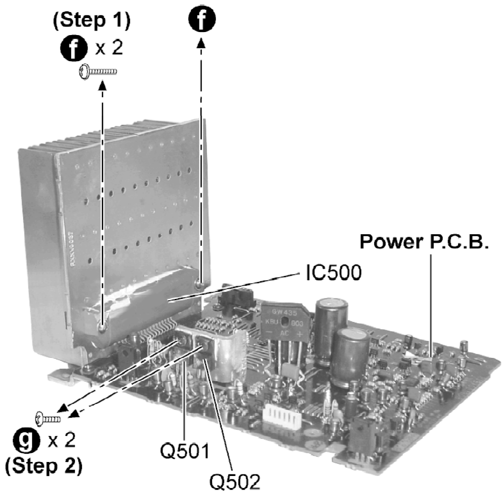
**- Follow the (Step 1) - (Step 3) of Item 11.3.**

**- Follow the (Step 1) - (Step 3) of Item 11.8.**

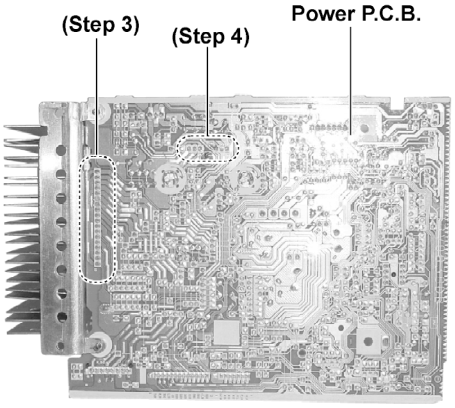
**- Follow the (Step 1) - (Step 2) of Item 11.9.**

**- Follow the (Step 1) - (Step 2) of Item 11.10.**

**- Follow the (Step 1) - (Step 2) of Item 11.12.**


(Step 1)
f x 2
f
Power P.C.B.
IC500
g x 2
(Step 2)
Q501
Q502

**Step 1 : Remove 2 screws.**
**Step 2 : Remove 2 screws.**

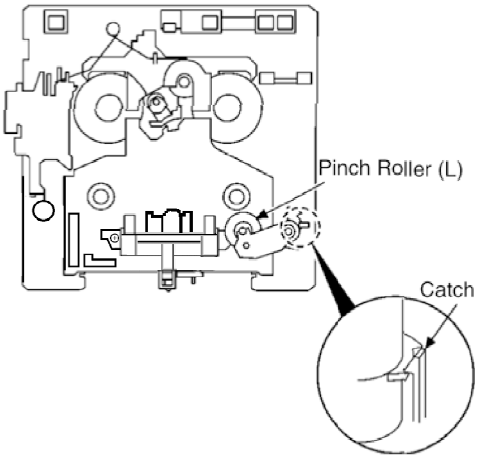

(Step 3)
(Step 4)
Power P.C.B.

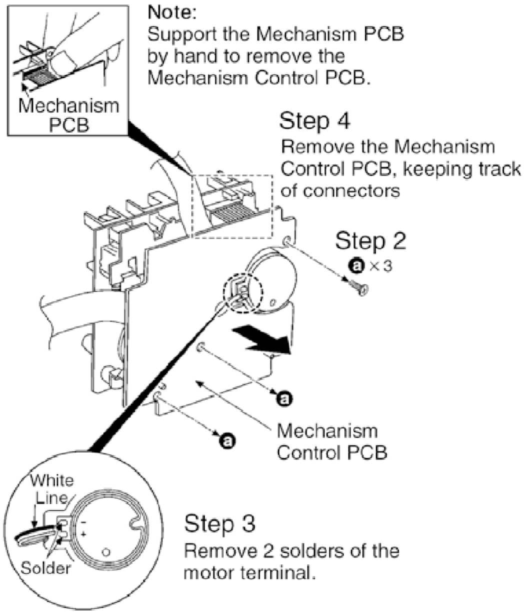
**Step 3 : Unsolder the Power IC500.**
**Step 4 : Unsolder the Transistors Q501 and Q502.**

## 11.17. Procedure for Replacing Pinch Roller and Head Block (Cassette Mechanism Unit)

**- Follow the (Step 1) - (Step 6) of Item 11.2.**
**- Follow the (Step 1) - (Step 3) of Item 11.3.**
**- Follow the (Step 1) - (Step 4) of Item 11.4.**

**Step 1**
Release catches to remove the pinch rollers (L).


Pinch Roller (L)
Catch

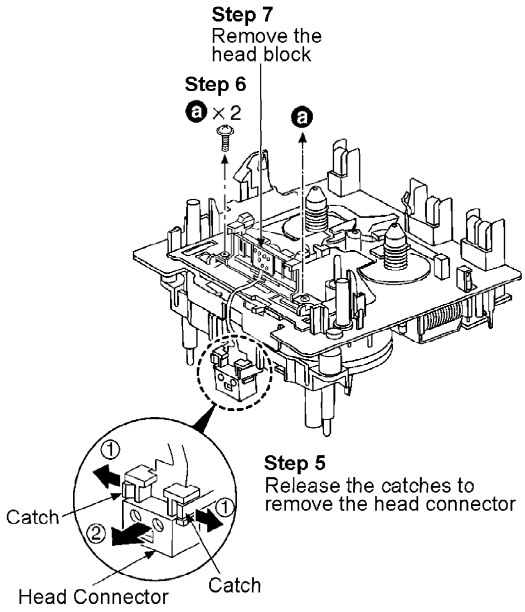

Note:
Support the Mechanism PCB by hand to remove the Mechanism Control PCB.

Step 4
Remove the Mechanism Control PCB, keeping track of connectors

Step 2
ⓐ × 3

Step 3
Remove 2 solders of the motor terminal.

Mechanism PCB
ⓐ
ⓐ
Mechanism Control PCB
White Line
Solder


**Step 7**
Remove the head block
**Step 6**
ⓐ × 2
ⓐ
①
Catch
②
①
**Step 5**
Release the catches to remove the head connector
Head Connector
Catch

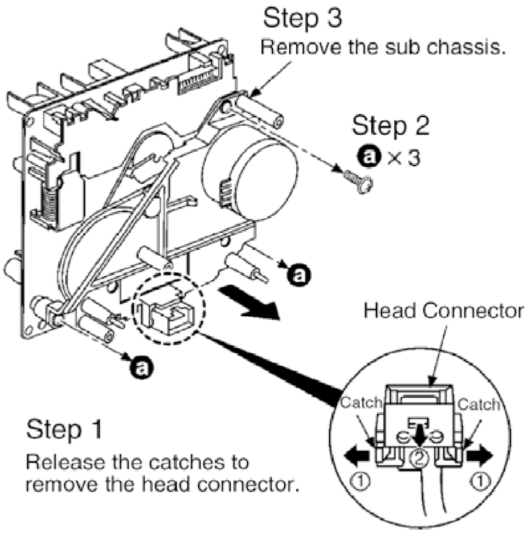
## 11.18. Procedure for Replacing Motor, Capstan Belt A, Capstan Belt B, and Winding Belt (Cassette Mechanism Unit)

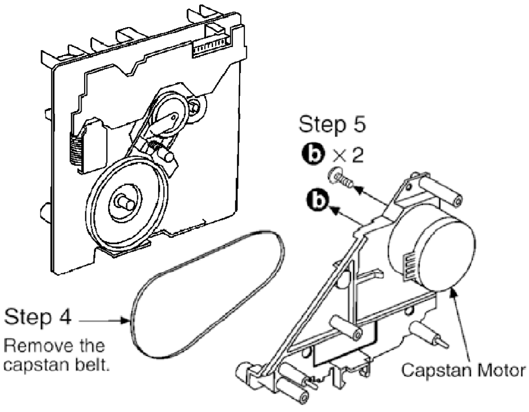
**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

**- Follow the (Step 1) - (Step 4) of Item 11.4.**

**- Follow the (Step 1) - (Step 4) of Item 11.17.**

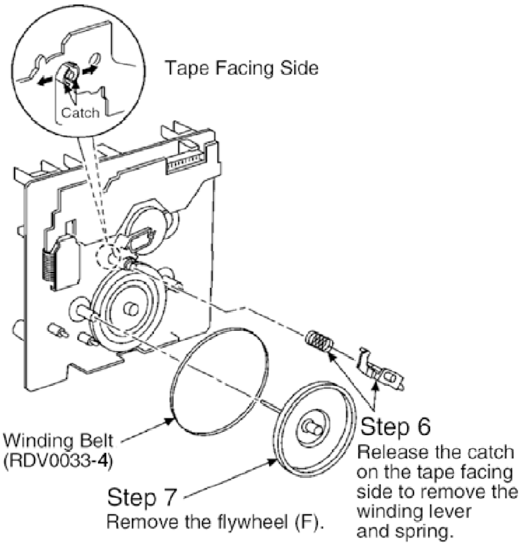

Step 3
Remove the sub chassis.
Step 2
ⓐ × 3
ⓐ
ⓐ
Head Connector
Catch
Catch
②
①
①
Step 1
Release the catches to remove the head connector.



Step 4
Remove the capstan belt.

Step 5
ⓑ × 2

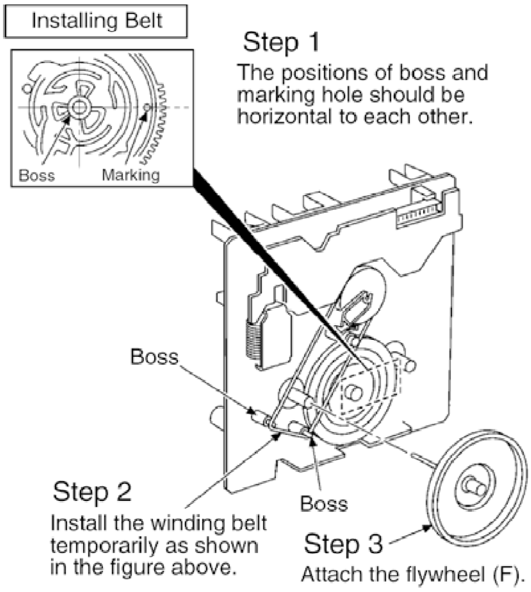
ⓑ
Capstan Motor



Step 6
Release the catch on the tape facing side to remove the winding lever and spring.

Step 7
Remove the flywheel (F).

Tape Facing Side
Catch
Winding Belt
(RDV0033-4)

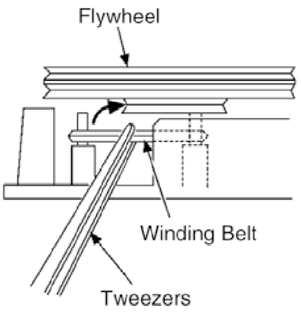


Step 1
The positions of boss and marking hole should be horizontal to each other.

Step 2
Install the winding belt temporarily as shown in the figure above.

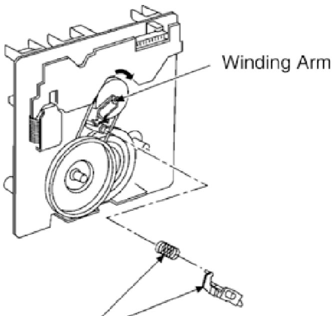
Step 3
Attach the flywheel (F).

Installing Belt
Boss
Marking
Boss
Boss


Flywheel
Winding Belt
Tweezers

## Step 4

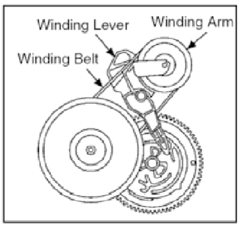
Catch the winding belt on the flywheel (F).


Winding Arm

## Step 5

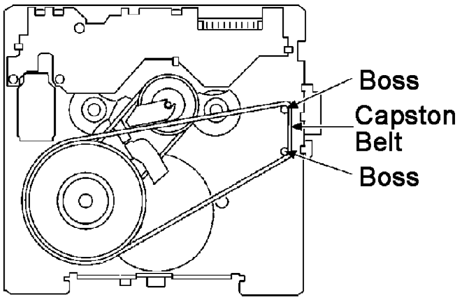
Install the winding lever and spring while the winding arm is pressed to the arrow direction. (Be sure that the winding lever is firmly inserted and the catch is hooked.)

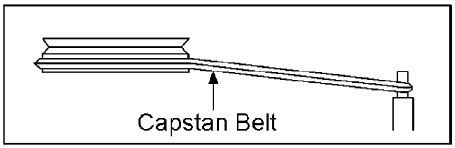
Note:
The winding lever should be positioned as shown in the right figure.


Winding Lever
Winding Arm
Winding Belt

## Step 6

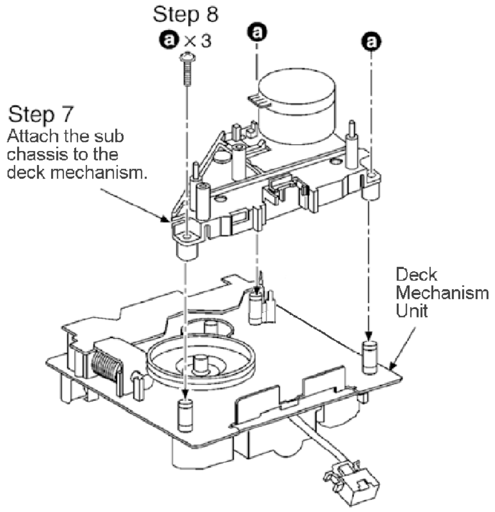
Install the capstan belt temporarily as shown in the figure below.


Boss
Capston Belt
Boss

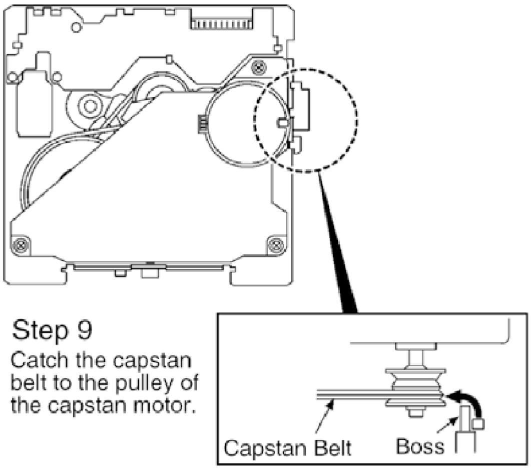

Capstan Belt

Side View

Note:
Keep the belt away from grease.


Step 8
a ×3
a
a
Deck Mechanism Unit

Step 7
Attach the sub chassis to the deck mechanism.


Capstan Belt
Boss

Step 9
Catch the capstan belt to the pulley of the capstan motor.

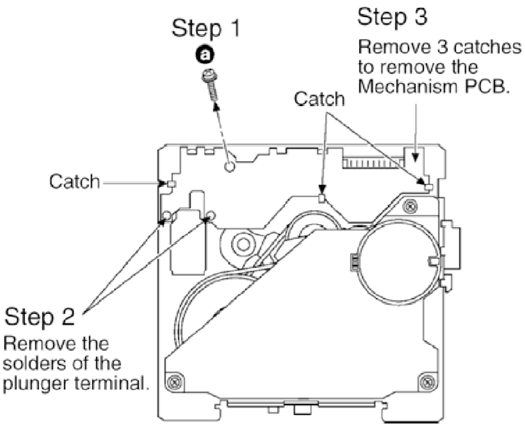
## 11.19. Procedure for Replacing Parts on Mechanism PCB

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

**- Follow the (Step 1) - (Step 4) of Item 11.4.**

**- Follow the (Step 1) - (Step 5) of Item 11.17.**

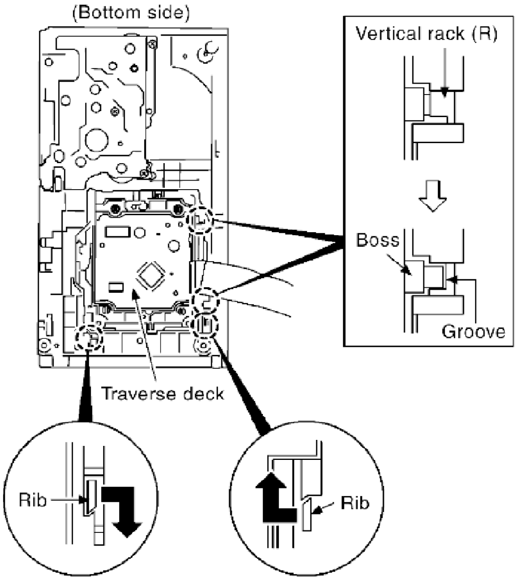

Step 1
a
Catch
Catch

Step 3
Remove 3 catches to remove the Mechanism PCB.

Step 2
Remove the solders of the plunger terminal.

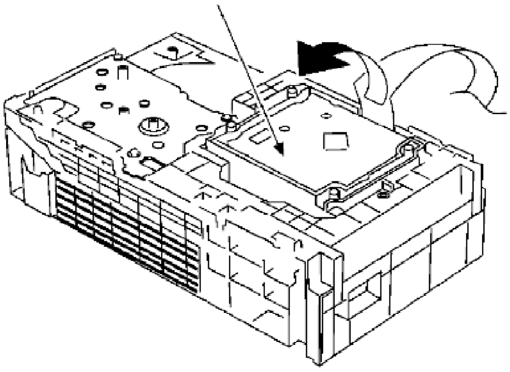
## 11.20. Replacement of CD traverse deck

- **Follow the (Step 1) - (Step 6) of Item 11.2.**
- **Follow the (Step 1) - (Step 3) of Item 11.3.**
- **Follow the (Step 1) - (Step 4) of Item 11.5.**
- **Follow the (Step 1) - (Step 5) of Item 11.13.**



Step 1
Move ribs at both sides to the arrow direction
(The vertical rack (R) slides and the groove opens)

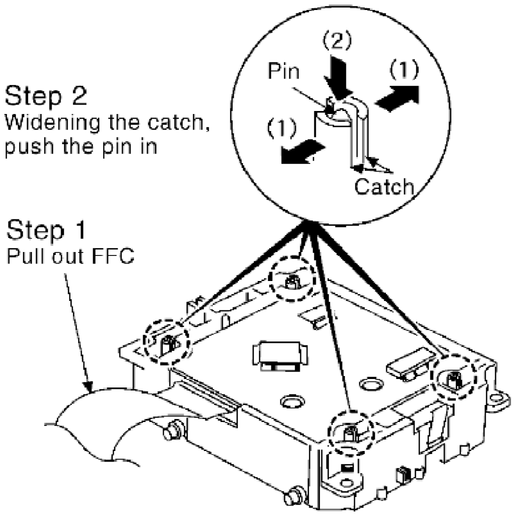
(Bottom side)
Vertical rack (R)
Boss
Groove
Traverse deck
Rib
Rib

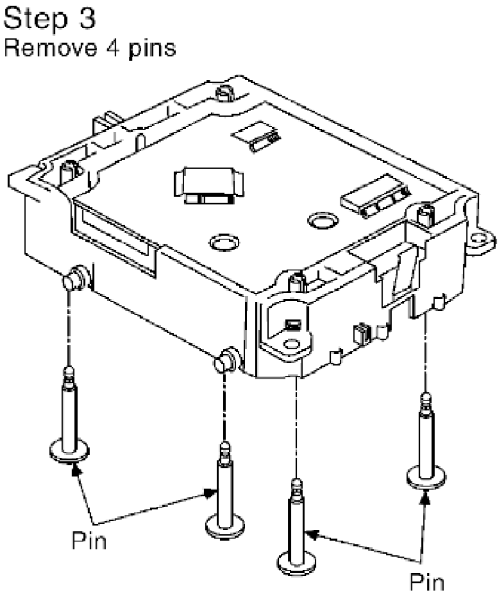


Step 2
Remove CD traverse deck rotating to the arrow direction.

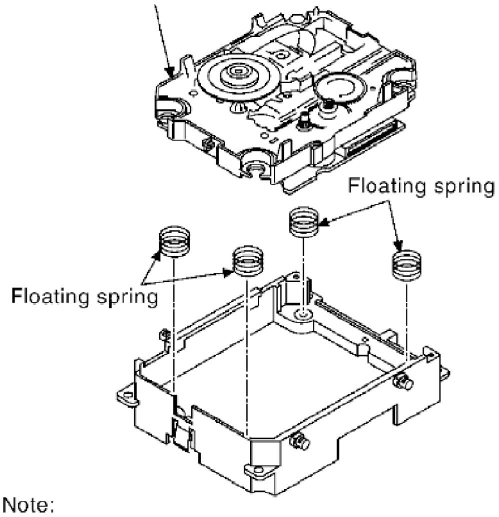
## 11.21. Replacement of optical pickup unit (CD mechanism)

- **Follow the (Step 1) - (Step 6) of Item 11.2.**
- **Follow the (Step 1) - (Step 3) of Item 11.3.**
- **Follow the (Step 1) - (Step 4) of Item 11.5.**
- **Follow the (Step 1) - (Step 5) of Item 11.13.**
- **Follow the (Step 1) - (Step 2) of Item 11.20.**


Step 2
Widening the catch,
push the pin in
(2)
Pin
(1)
(1)
Catch
Step 1
Pull out FFC


Step 3
Remove 4 pins
Pin
Pin

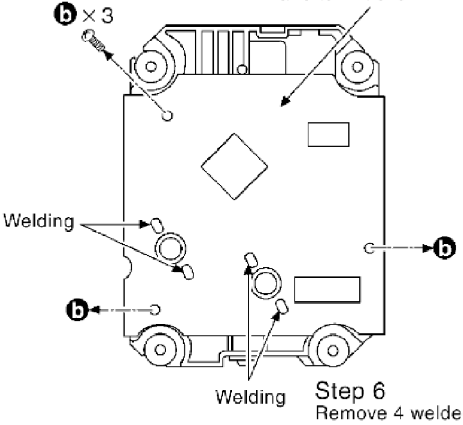
Step 4
Remove the traverse deck (JUN)


Floating spring
Floating spring

Note:
As floating springs (4 pieces) come off at
the same time, be careful not to lose them.

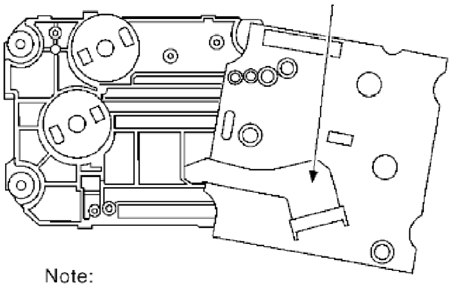
Step 7
Remove CD servo board
and turn it over.

Step 5
ⓑ × 3

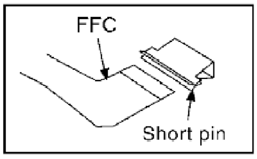

Welding
ⓑ
ⓑ
Welding

Step 6
Remove 4 welded parts
of the motor terminal.

Step 8
Pull FFC out from the
connector.

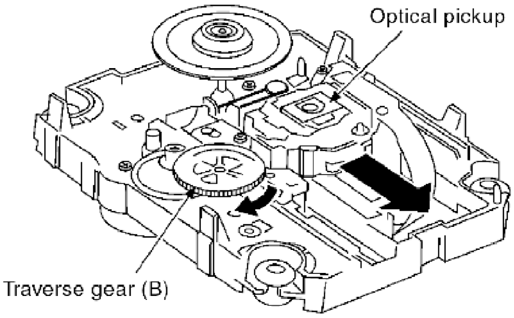


Note:
Insert a short pin
into FFC of the
optical pickup.
[See "Notice on
handling of the
optical pickup"]

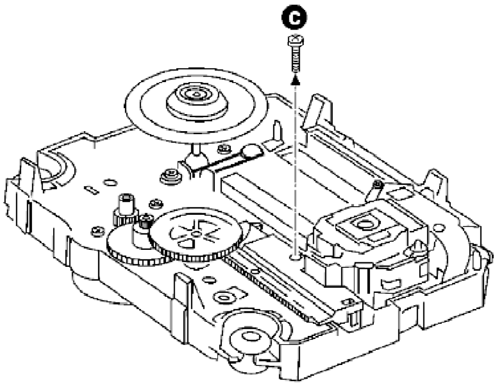

FFC
Short pin

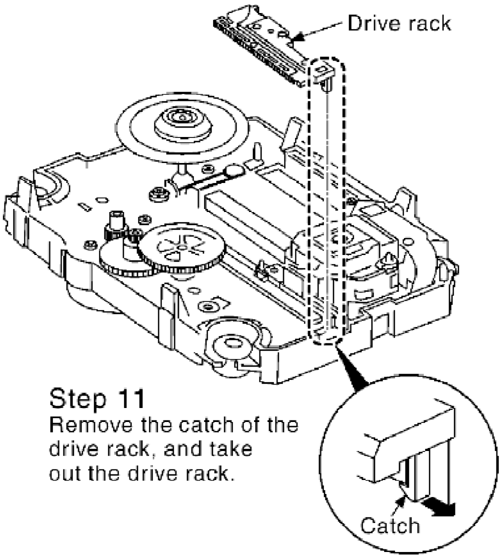
### Step 9

Rotate the traverse deck (B) to the arrow direction and shift the optical pickup to the furthest backward.


Optical pickup
Traverse gear (B)

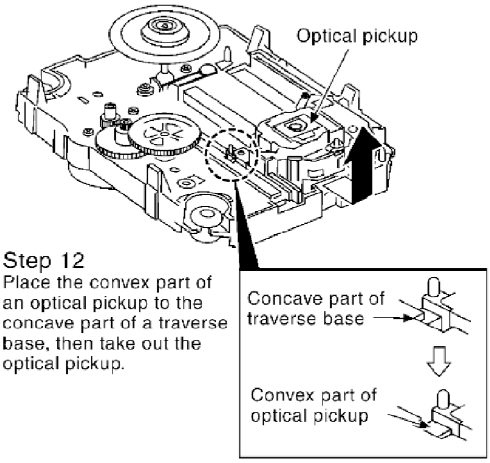
### Step 10



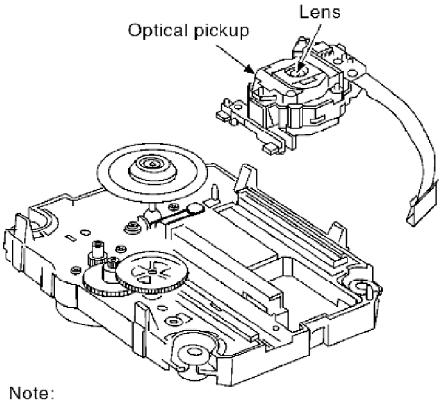

Drive rack
Catch

### Step 11

Remove the catch of the drive rack, and take out the drive rack.


Optical pickup
Concave part of traverse base
Convex part of optical pickup

Step 12
Place the convex part of an optical pickup to the concave part of a traverse base, then take out the optical pickup.


Lens
Optical pickup

Note:
Do not touch the lens of the optical pickup

## 11.22. Replacement of a traverse gear A and a traverse gear B

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

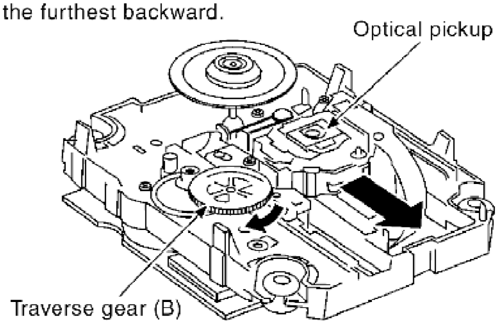
**- Follow the (Step 1) - (Step 4) of Item 11.5.**

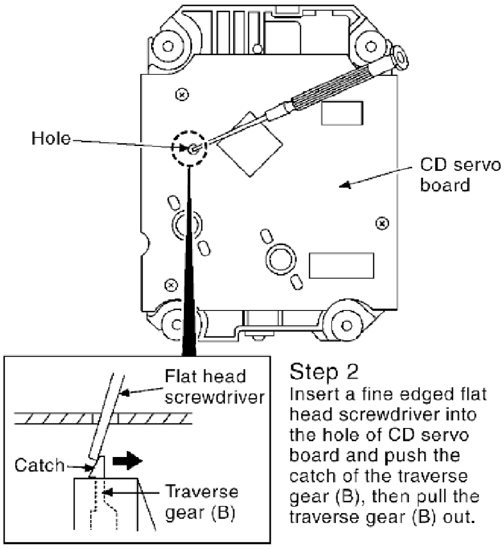
**- Follow the (Step 1) - (Step 5) of Item 11.13.**

**- Follow the (Step 1) - (Step 2) of Item 11.20.**

**- Follow the (Step 1) - (Step 12) of Item 11.21.**

Step 1
Rotate the traverse gear (B) to the arrow direction, and shift the optical pickup to the furthest backward.


Optical pickup
Traverse gear (B)

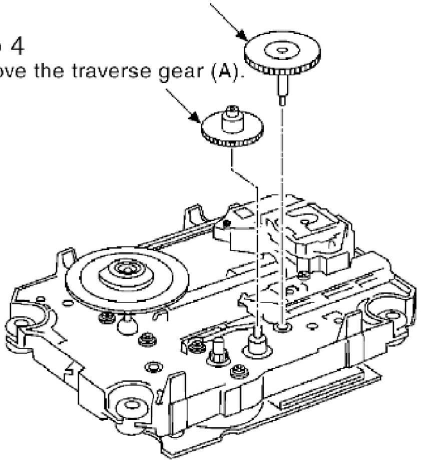


Step 2
Insert a fine edged flat head screwdriver into the hole of CD servo board and push the catch of the traverse gear (B), then pull the traverse gear (B) out.

Note:
Be careful not to break the hook of the traverse gear (B)

Step 3
Remove the traverse gear (B).

Step 4
Remove the traverse gear (A).



Note:
Do not use the removed traverse gear (B) anymore.
Surely replace with a new one.

## 11.23. Procedure for removing CD loading mechanism

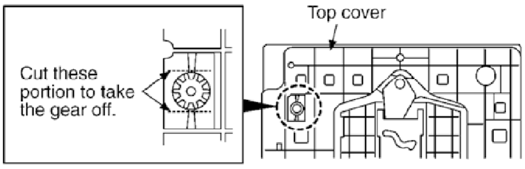
1. **Turn off by pressing power SW in the body.**
2. **Unplug AC power cord after the indication of [GOOD-BYE], then disassemble the body.**
3. **Disassemble the body, and take out CD loading mechanism.**
4. **Perform disassembly according to the following procedure for disassembly.**

## 11.24. CR16 mechanism disassembly procedure

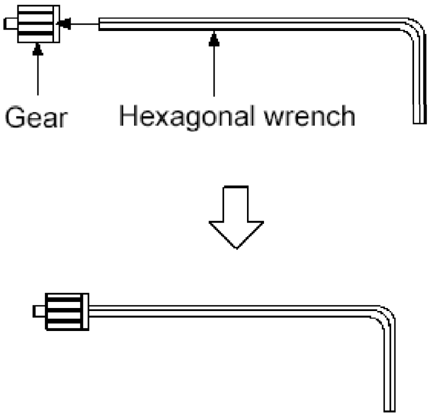
### 11.24.1. Gear for servicing information

- **This unit has a gear which used for checking items (open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)**
- **For preparation of gear (for servicing), perform the procedures as follows.**
- **In case of re-servicing the same set, the “ gear for servicing” may be took off because it had been used. So, the “gear for servicing” must be stored.**

**1. Remove the gear attached to top cover of CD loading mechanism.**



**2. Insert the hexgonal wrench (2.5mm) into the gear.**

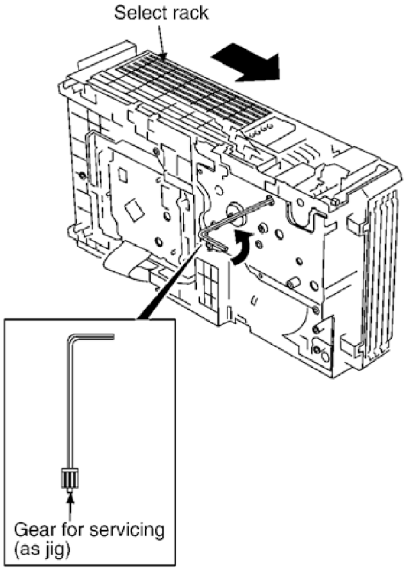


(Preparation of gear as jig is completed)

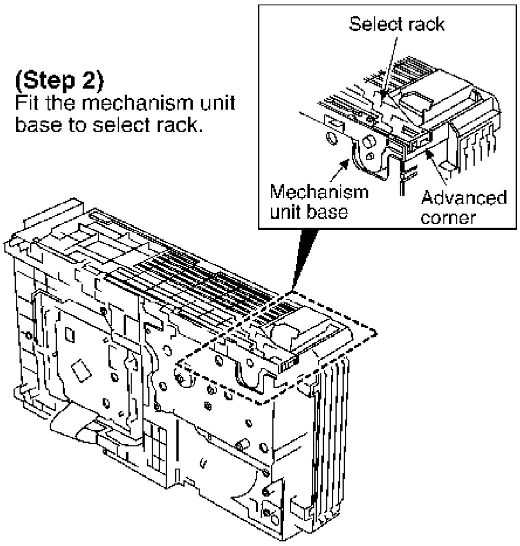
### 11.24.2. Replacement for the disc tray

- **Follow the (Step 1) - (Step 6) of Item 11.2.**
- **Follow the (Step 1) - (Step 3) of Item 11.3.**
- **Follow the (Step 1) - (Step 4) of Item 11.5.**
- **Follow the (Step 1) - (Step 5) of Item 11.13.**

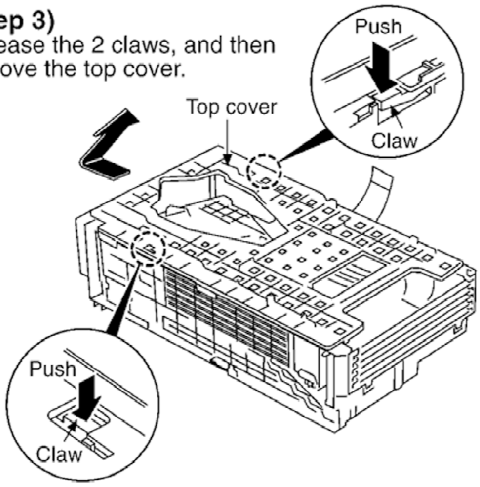
**(Step 1)**
Rotate the gear for servicing and move the select rack to advanced corner.


Select rack
Gear for servicing
(as jig)

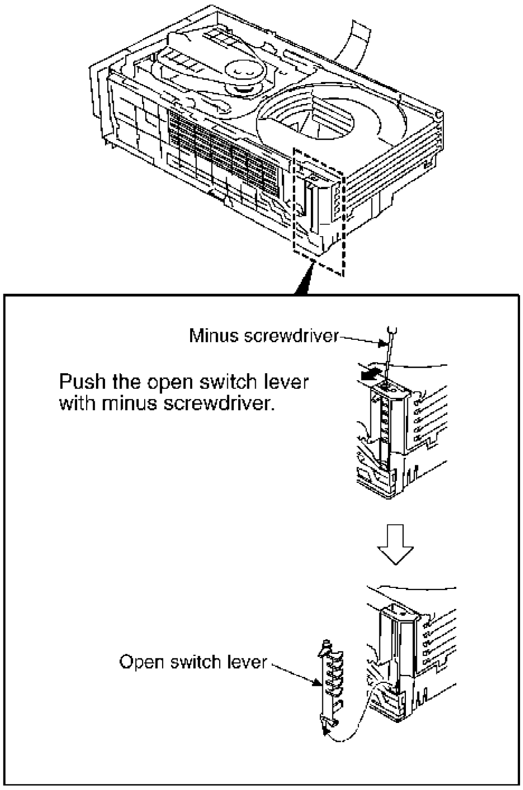
**(Step 2)**
Fit the mechanism unit base to select rack.


Select rack
Mechanism unit base
Advanced corner

**(Step 3)**
Release the 2 claws, and then remove the top cover.


Push
Claw
Top cover
Push
Claw

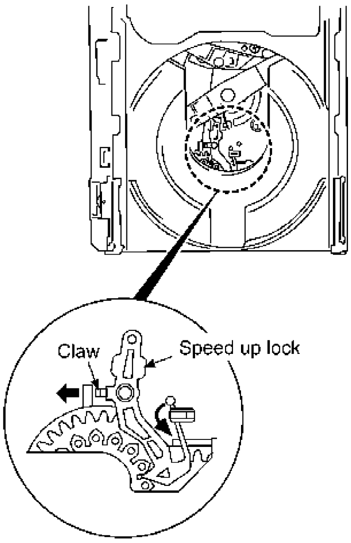
**(Step 4)**
Remove the open switch lever.



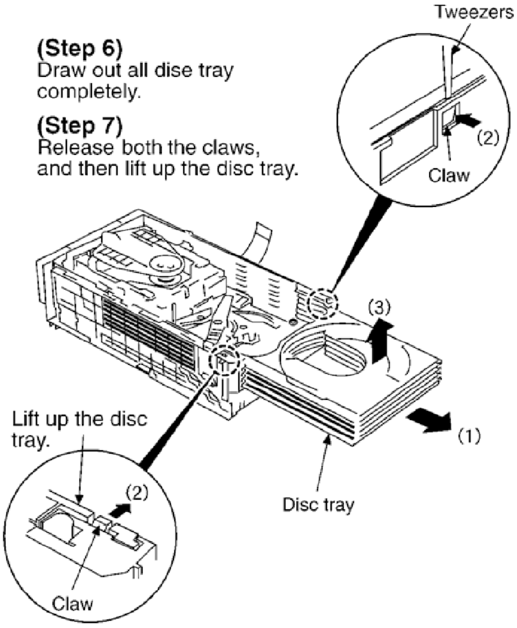
Push the open switch lever with minus screwdriver.

Minus screwdriver
Open switch lever

**(Step 5)**
Release the claw, and then remove the speed up lock.


Claw
Speed up lock

Insert the tweezers between the mechanism base and disc tray, and then lift up the disc tray.

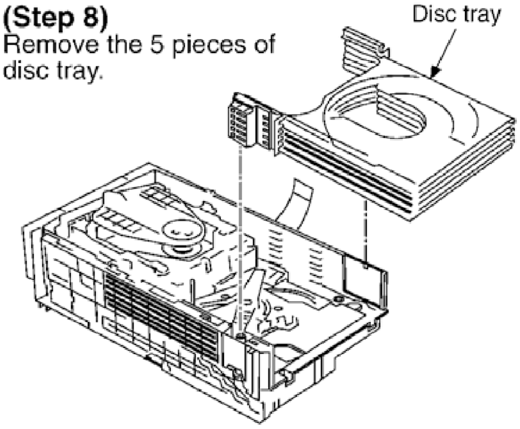

Tweezers
(2)
Claw
(3)
(1)
Disc tray
(2)
Claw

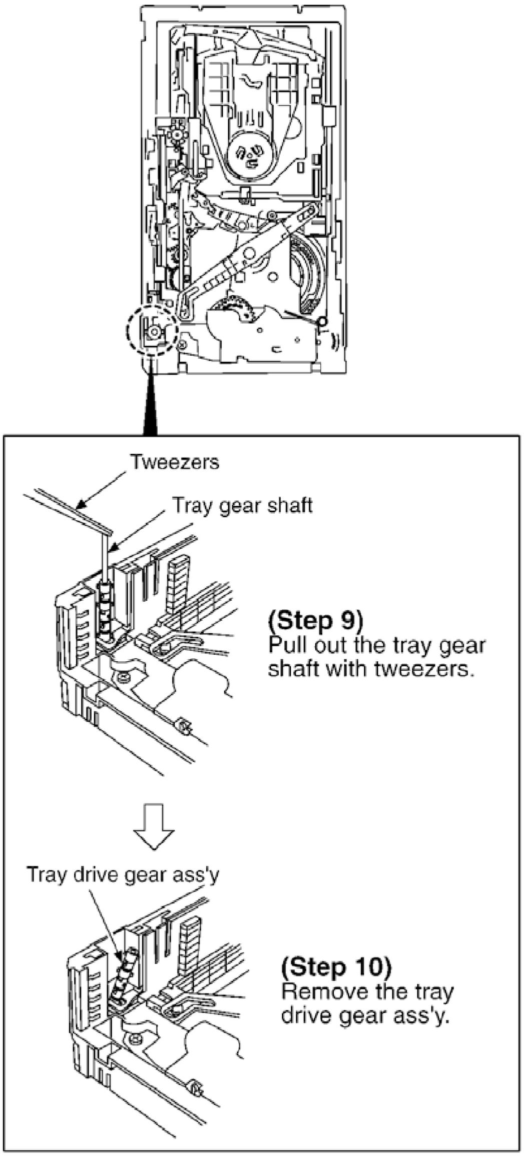
**(Step 6)**
Draw out all dise tray completely.

**(Step 7)**
Release both the claws, and then lift up the disc tray.

Lift up the disc tray.

**(Step 8)**
Remove the 5 pieces of disc tray.




Tweezers
Tray gear shaft
Tray drive gear ass'y

**(Step 9)**
Pull out the tray gear shaft with tweezers.

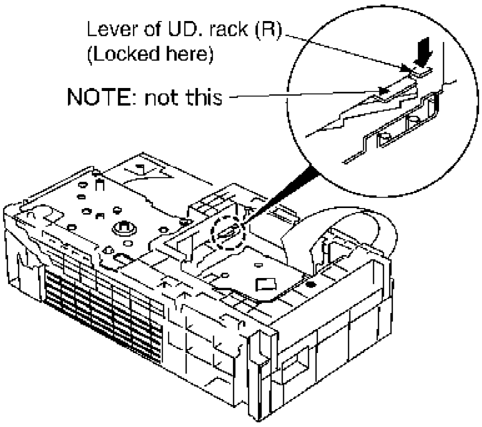
**(Step 10)**
Remove the tray drive gear ass'y.

### 11.24.3. Replacement for the traverse deck

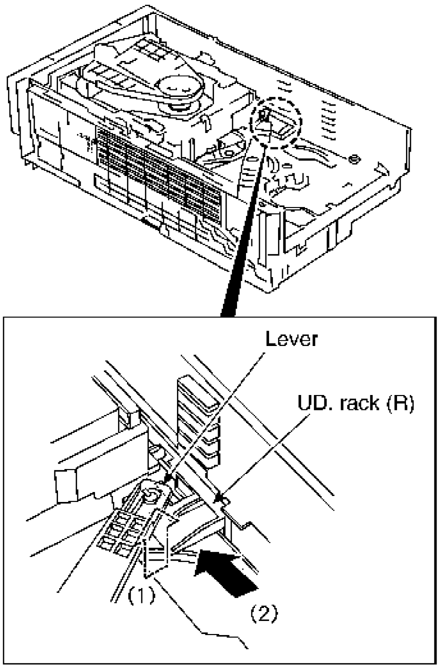
- **Follow the (Step 1) - (Step 6) of Item 11.2.**
- **Follow the (Step 1) - (Step 3) of Item 11.3.**
- **Follow the (Step 1) - (Step 4) of Item 11.5.**
- **Follow the (Step 1) - (Step 5) of Item 11.13.**
- **Follow the (Step 1) - (Step 10) of item 11.24.2.**

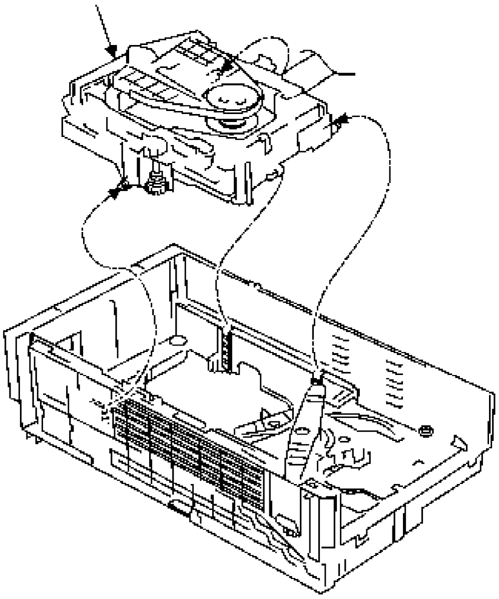
**(Step 1)**
Confirm the position for lever of UD. rack (R) to remove traverse unit.

**(Step 2)**
Turn the unit over. (Upside: P.C.B.)


Lever of UD. rack (R)
(Locked here)
NOTE: not this

**(Step 3)**
Turn the unit over again, slide UD. rack (R) while pushing up the lever from the bottom.


Lever
UD. rack (R)
(1)
(2)



**(Step 4)**
Remove the traverse unit.

### 11.24.4. Disassembly for CD loading unit

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

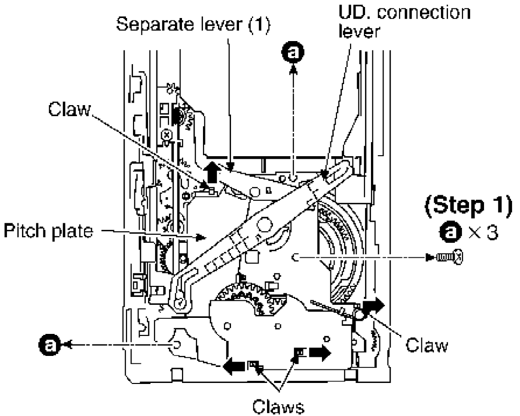
**- Follow the (Step 1) - (Step 3) of Item 11.3.**

**- Follow the (Step 1) - (Step 4) of Item 11.5.**

**- Follow the (Step 1) - (Step 5) of Item 11.13.**

**- Follow the (Step 1) - (Step 10) of item 11.24.2.**

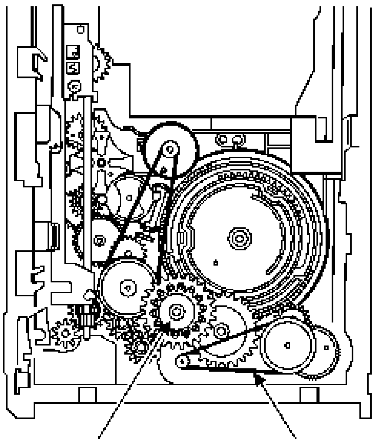
**- Follow the (Step 1) - (Step 4) of item 11.24.3.**


Separate lever (1)
UD. connection lever
a
Claw
Pitch plate
a
Claw
Claws

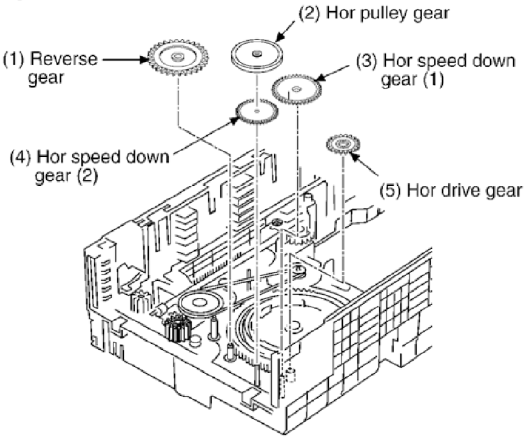
**(Step 1)**
a × 3

**(Step 2)**
Release the 4 claws, and then remove the pitch plate together with separate lever (1) and UD. connection lever.

**(Step 3)**
Remove the speed up gear and hor belt.

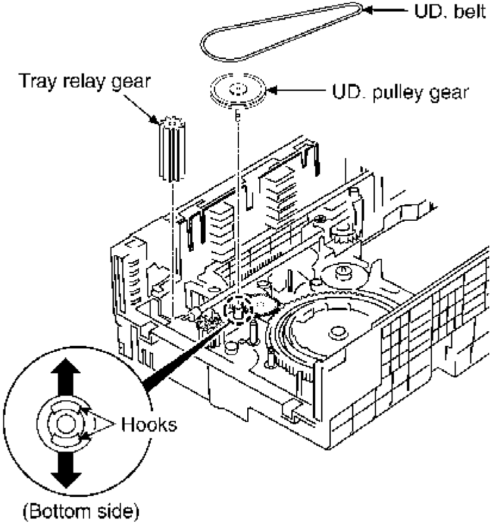

Speed up gear
Hor belt

**(Step 4)**
Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.

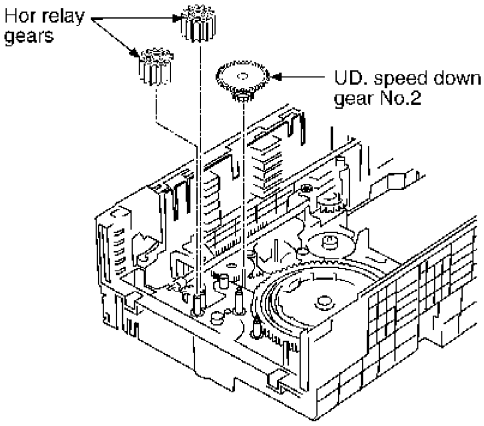

(2) Hor pulley gear
(1) Reverse gear
(3) Hor speed down gear (1)
(4) Hor speed down gear (2)
(5) Hor drive gear

**(Step 5)**
Remove the UD. belt and tray relay gear.

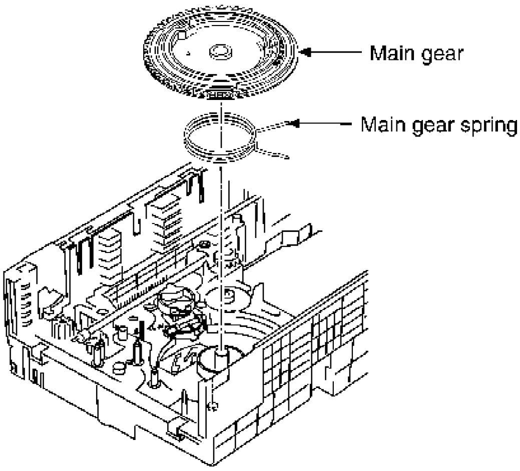
**(Step 6)**
Pull out the UD. pulley gear, loosen 2 hooks of the bottom of mechanism bese.


UD. belt
Tray relay gear
UD. pulley gear
Hooks
(Bottom side)

**(Step 7)**
Remove the 2 hor relay gears and UD. speed down gear No.2.

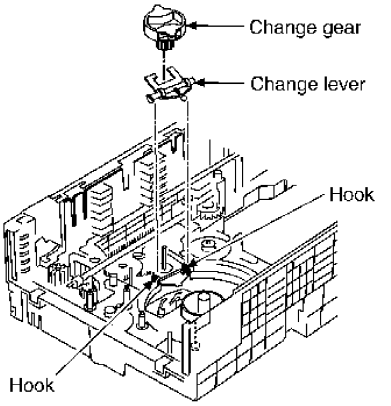

Hor relay gears
UD. speed down gear No.2

**(Step 8)**
Remove the main gear and main gear spring.

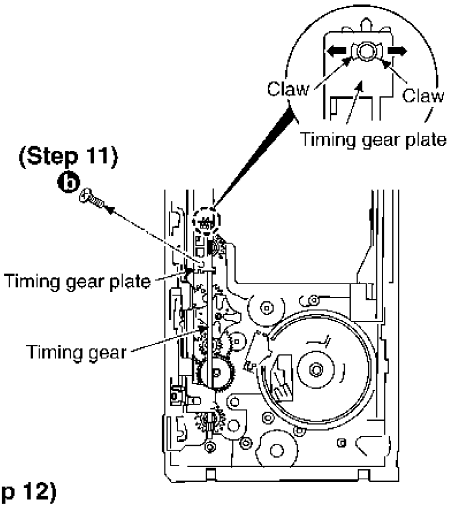

Main gear
Main gear spring

**(Step 9)**
Remove the change gear.

**(Step 10)**
Raise the change lever upright, and pull it out of hook.


Change gear
Change lever
Hook
Hook

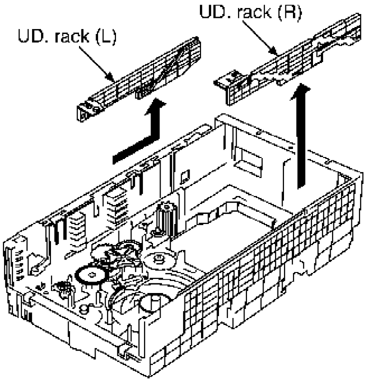
**(Step 11)**


b
Claw
Claw
Timing gear plate
Timing gear plate
Timing gear

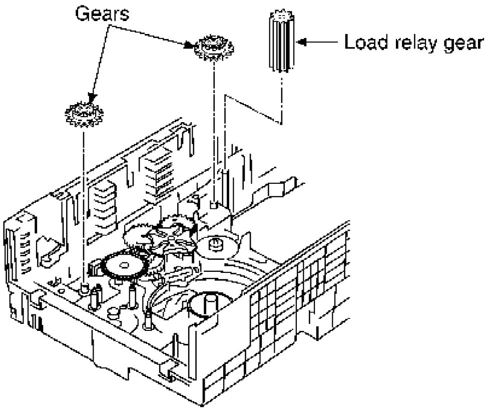
**(Step 12)**
Release the 2 claws, and then remove the timing gear and timing gear plate.

**(Step 13)**
Move the UD. rack (L) to backward, and then remove it.

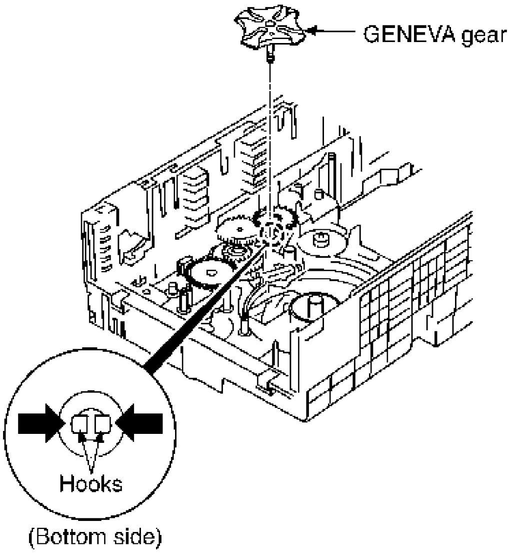
**(Step 14)**
Remove the UD. rack (R).


UD. rack (R)
UD. rack (L)

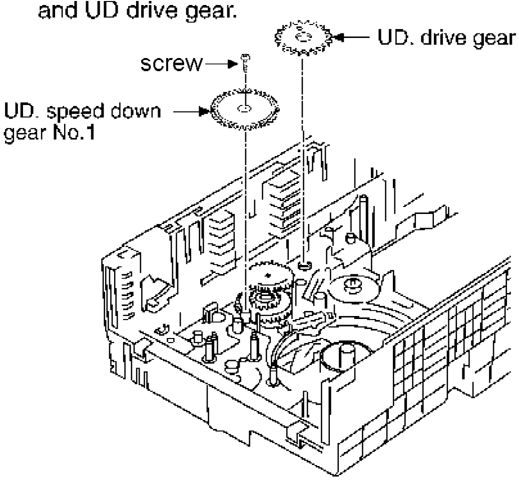
**(Step 15)**
Remove the 2 gears and load relay gear.


Gears
Load relay gear

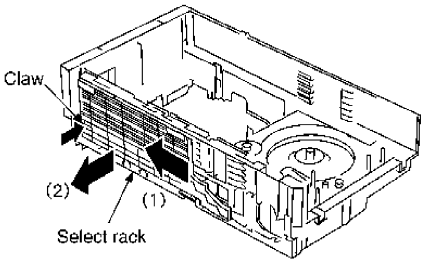
**(Step 16)**
Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.

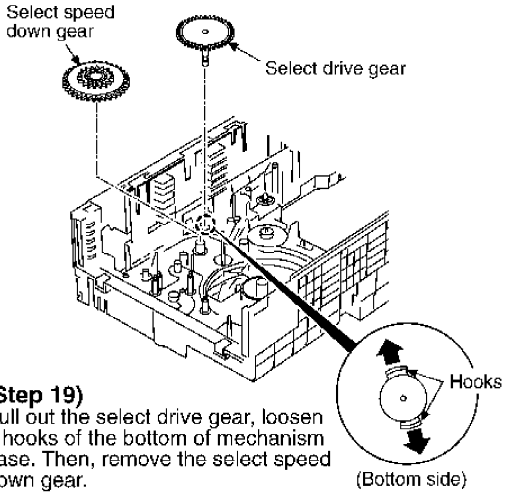

GENEVA gear
Hooks
(Bottom side)

**(Step 17)**
Remove the UD. speed down gear No.1 and UD drive gear.


UD. drive gear
screw
UD. speed down gear No.1

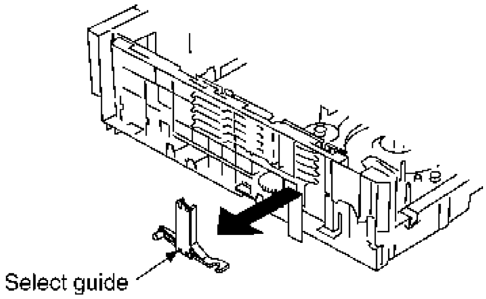
**(Step 18)**
Slide the select rack to the edge direction of the arrow (1). Push the claw and pull out to arrow (2) while sliding the select rack to the arrow (1).


Claw
(2)
(1)
Select rack

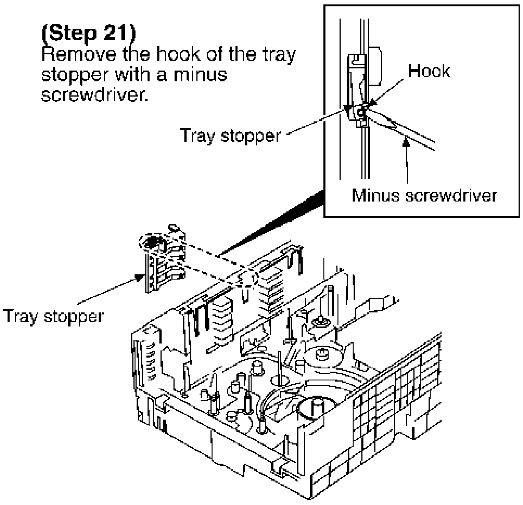

Select speed down gear
Select drive gear
Hooks
(Bottom side)

**(Step 19)**
Pull out the select drive gear, loosen 2 hooks of the bottom of mechanism base. Then, remove the select speed down gear.

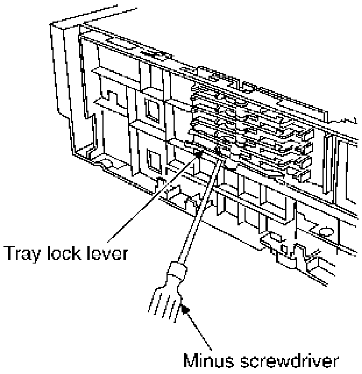
**(Step 20)**
Remove the select guide after sliding upside.


Select guide

**(Step 21)**
Remove the hook of the tray stopper with a minus screwdriver.


Hook
Tray stopper
Minus screwdriver
Tray stopper

**(Step 22)**
Remove the bottom of the tray lock lever with a minus screwdriver and others.


Tray lock lever
Minus screwdriver

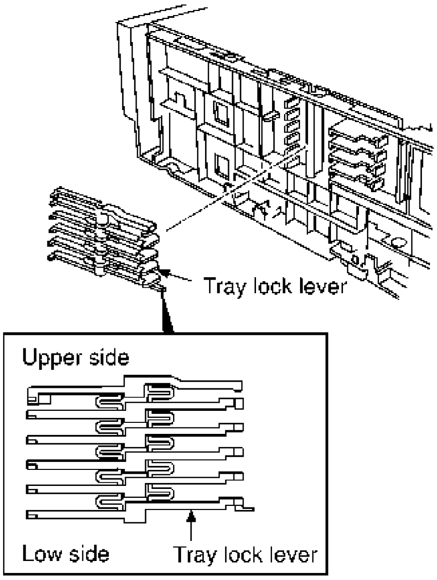
## 11.25. CR16 MECHANISM ASSEMBLY PROCEDURE

**The following specified greases and/or oil must be applied when some specific parts are changed.**

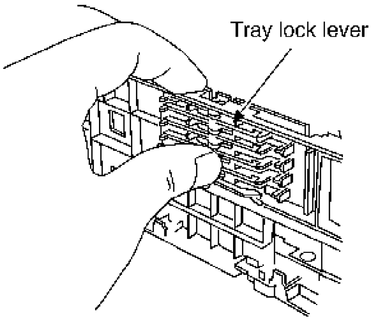
1. **Floil grease (VFK1298) : The floil grease must be applied to tray, tray (L) and tray (R).**
2. **Hanarl oil (VFK1700) : The hanarl oil must be applied to any parts with grease other than the said parts.**

**- Follow the (Step 1) - (Step 6) of Item 11.2.**
**- Follow the (Step 1) - (Step 3) of item 11.3.**
**- Follow the (Step 1) - (Step 4) of item 11.5.**
**- Follow the (Step 1) - (Step 5) of Item 11.13.**
**- Follow the (Step 1) - (Step 10) of item 11.24.2.**
**- Follow the (Step 1) - (Step 4) of item 11.24.3.**
**- Follow the (Step 1) - (Step 22) of item 11.24.4.**

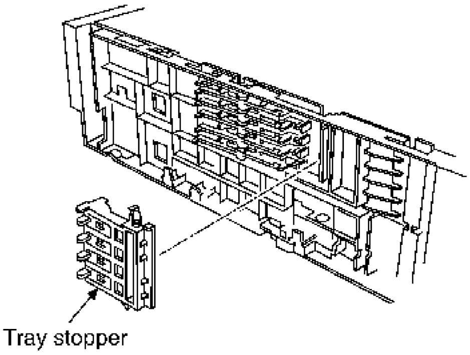
**(Step 1)**
Install the tray lock lever to mechanism base.


Tray lock lever
Upper side
Low side
Tray lock lever

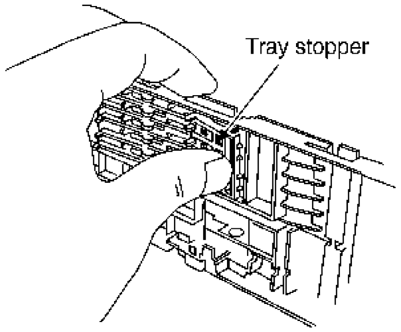
**(Step 2)**
Push the tray lock lever with a hand and install it.


Tray lock lever

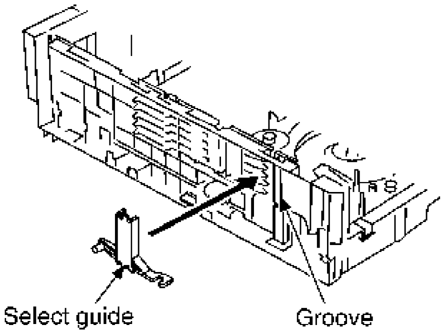
**(Step 3)**
Install the tray stopper to mechanism bese.


Tray stopper

**(Step 4)**
Push the tray stopper with a hand and install it.

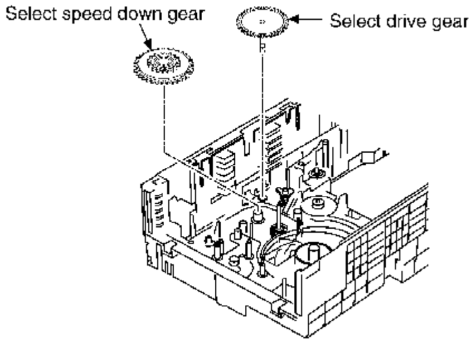

Tray stopper

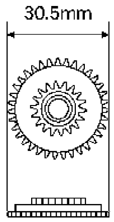
**(Step 5)**
Insert the select guide with a groove of the mechanism base and move it below.


Select guide
Groove

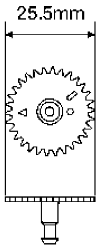
**(Step 6)**
Install the select speed down gear to mechanism base.

**(Step 7)**
Install the select drive gear to mechanism base.


Select speed down gear
Select drive gear

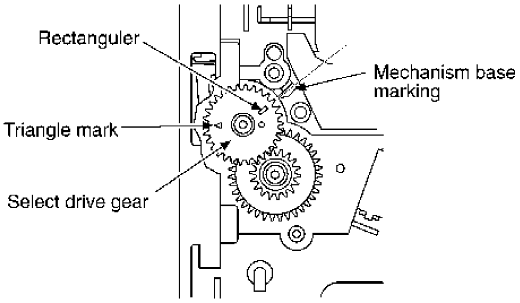


Select speed down gear
(White)



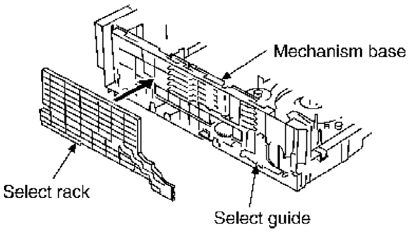
Select drive gear
(White)

**(Step 8)**
Fit a mechanism base marking to the rectanguler mark of gear so that the triangle mark can indicate the sideward direction.

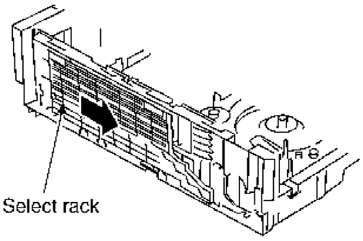

Rectanguler
Mechanism base marking
Triangle mark
Select drive gear

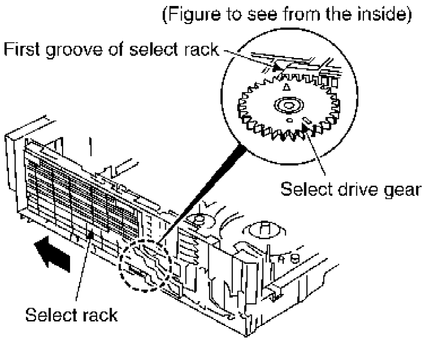
**(Step 9)**
Install the select rack to mechanism base.
Checking items before the installation.
1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position.(Rectangle/Trianguler mark)(Refer to Step 8)

1. Put a select rack down with it fitted to its circumference of mechanism base.


Mechanism base
Select rack
Select guide

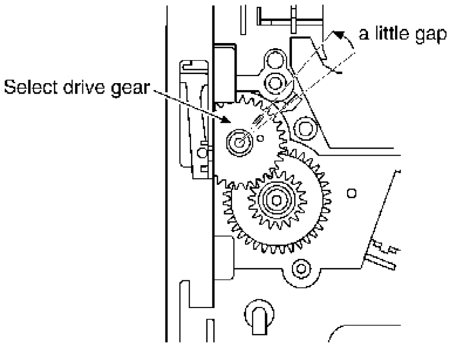
2. Slide the select rack with it's pushing to a little right direction and install it.


Select rack

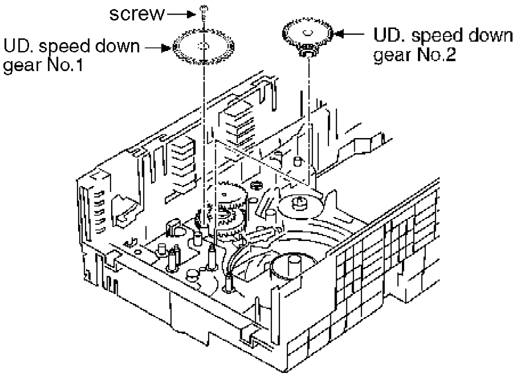

(Figure to see from the inside)
First groove of select rack
Select drive gear
Select rack

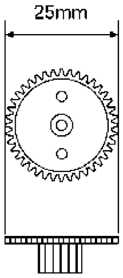
3. Check whether its end of triangular mark is in first groove of select rack, after fixing.
4. After insertion of select rack, continue the following work until the indication that it gose forward. And, all the while it must be checked that select rack is in the extreme end.

5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.

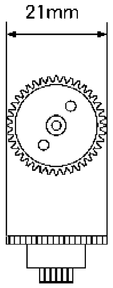

a little gap
Select drive gear

**(Step 10)**
Install the UD. speed down gear No.1 and UD. speed down gear No.2.


screw
UD. speed down gear No.1
UD. speed down gear No.2

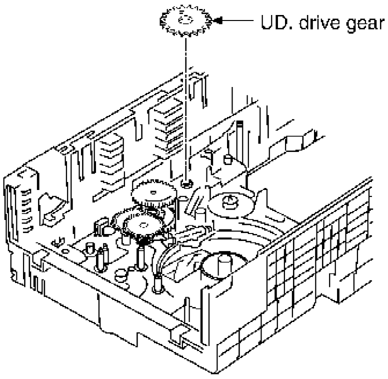


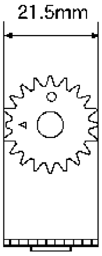
UD. speed down gear No.1
(White)



UD. speed down gear No.2
(Semi-transparent)

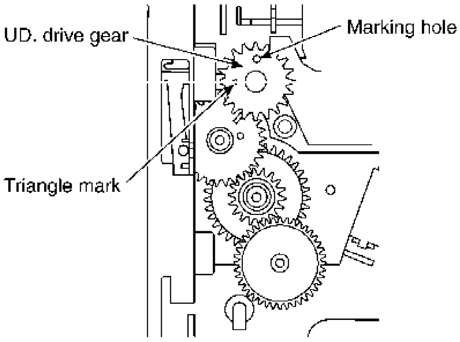
**(Step 11)**
Install the UD. drive gear to mechanism base.


UD. drive gear

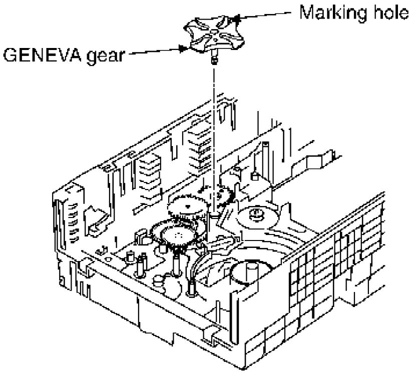


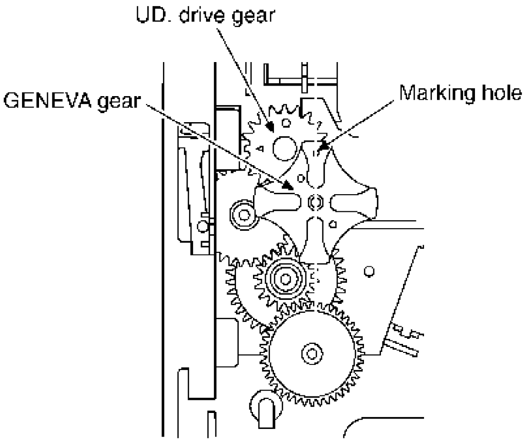
UD drive gear
(White)

**(Step 12)**
Insert the UD. drive gear with its marking hole upward.
At that time, its triangle mark should be sideways.

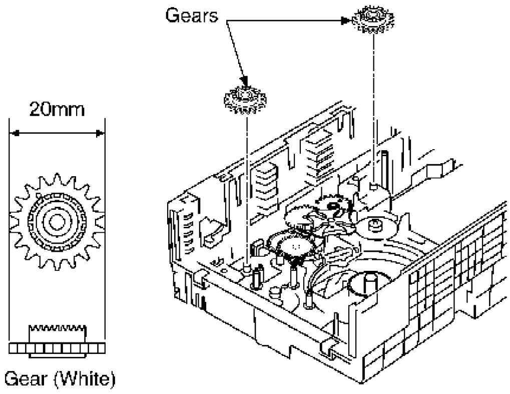

UD. drive gear
Marking hole
Triangle mark

**(Step 13)**
Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base.
At that time, UD. drive gear mustn't be moved.

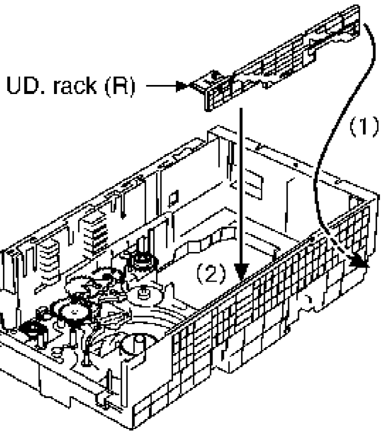

Marking hole
GENEVA gear


UD. drive gear
GENEVA gear
Marking hole

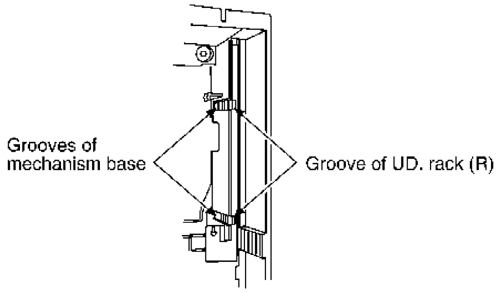
**(Step 14)**
Install the 2 gears to mechanism base.

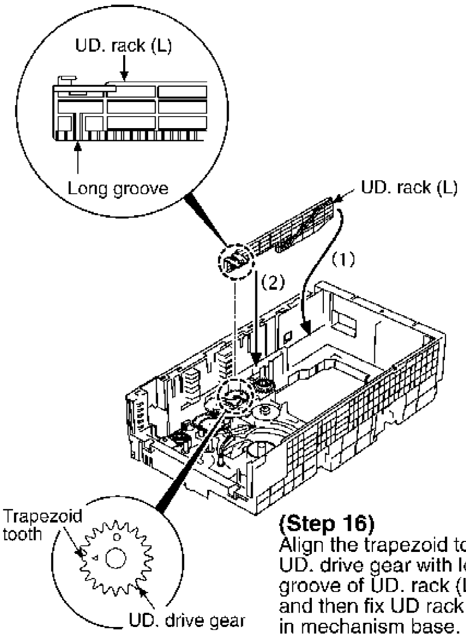

Gears
20mm
Gear (White)

**(Step 15)**
Insert the UD. rack (R) to (2) from arrow (1).



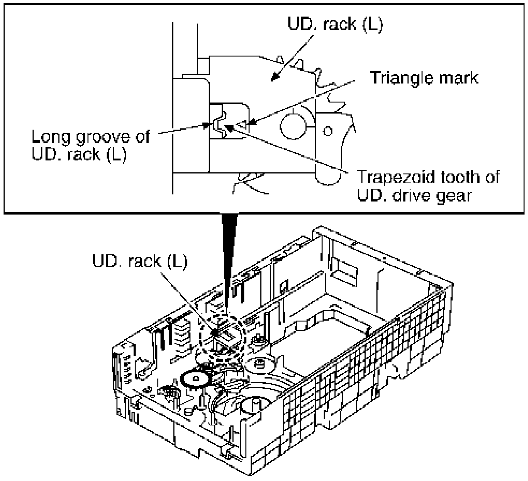
**NOTE:**
Put a groove of the mechanism base to the UD. rack (R).


Grooves of mechanism base
Groove of UD. rack (R)

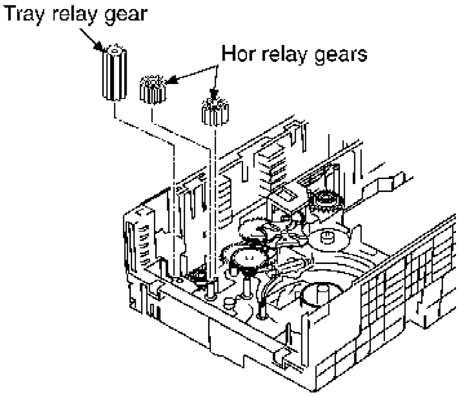

UD. rack (L)
Long groove
UD. rack (L)
(1)
(2)
Trapezoid tooth
UD. drive gear

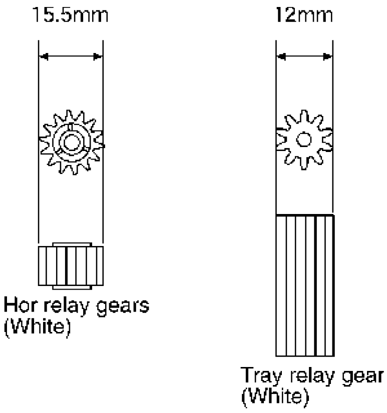
**(Step 16)**
Align the trapezoid tooth of UD. drive gear with long groove of UD. rack (L), and then fix UD rack (L) in mechanism base.

(Figure to see from the upper side)

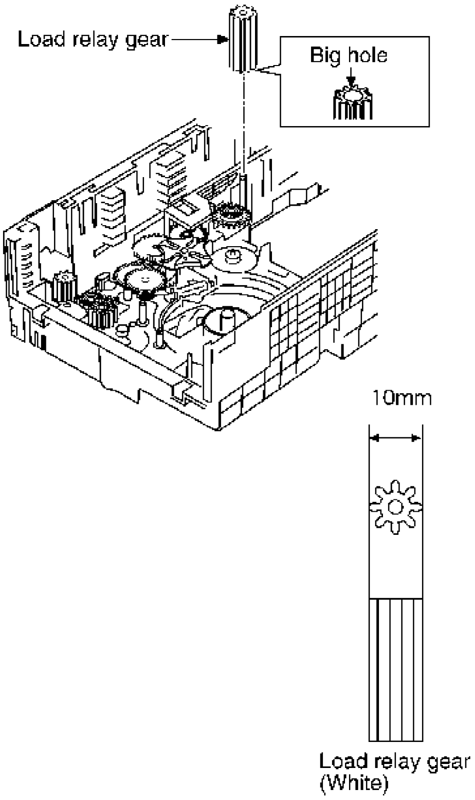

UD. rack (L)
Triangle mark
Long groove of UD. rack (L)
Trapezoid tooth of UD. drive gear
UD. rack (L)

**(Step 17)**
Install the tray relay gear and 2 hor relay gears.

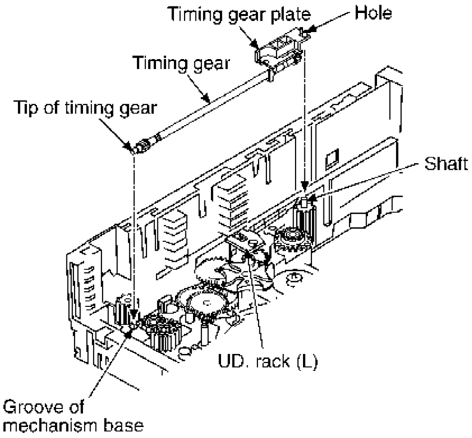

Tray relay gear
Hor relay gears


15.5mm
12mm
Hor relay gears
(White)
Tray relay gear
(White)

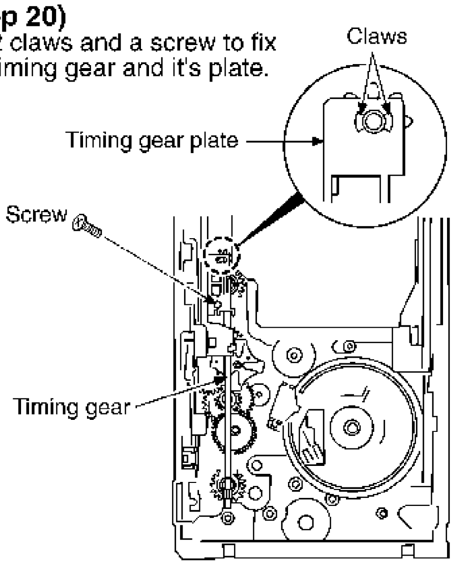
**(Step 18)**
Install the load relay gear to mechanism base.
(Fit load relay gear with its big hole downward.)


Load relay gear
Big hole
10mm
Load relay gear
(White)

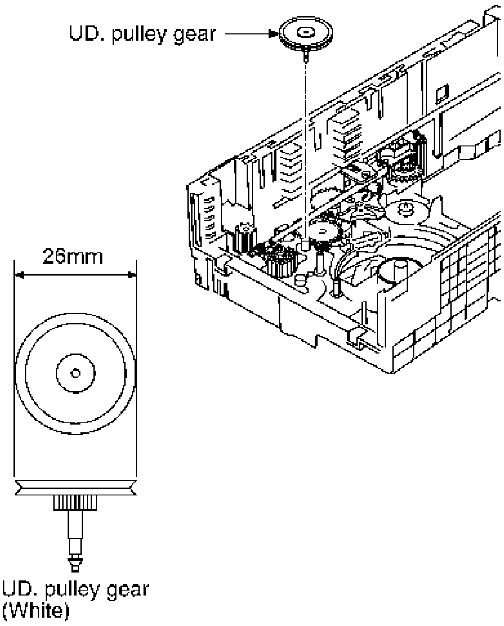
**(Step 19)**
Put on the top of the timing gear, then, install the timing gear and it's plate.
At that time avoid the UD. rack (L).


Timing gear plate
Hole
Timing gear
Tip of timing gear
Shaft
UD. rack (L)
Groove of
mechanism base

**(Step 20)**
Fix 2 claws and a screw to fix the timing gear and it's plate.

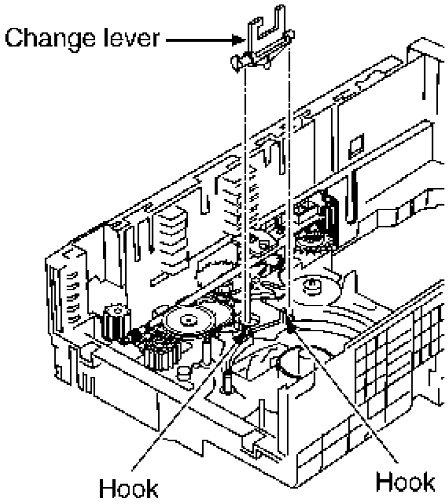

Claws
Timing gear plate
Screw
Timing gear

**(Step 21)**
Install the UD. pulley gear to mechanism base.


UD. pulley gear
26mm
UD. pulley gear
(White)

## (Step 22)

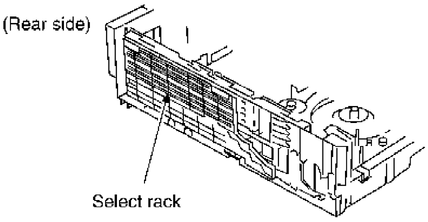
Insert the change lever with it upright.

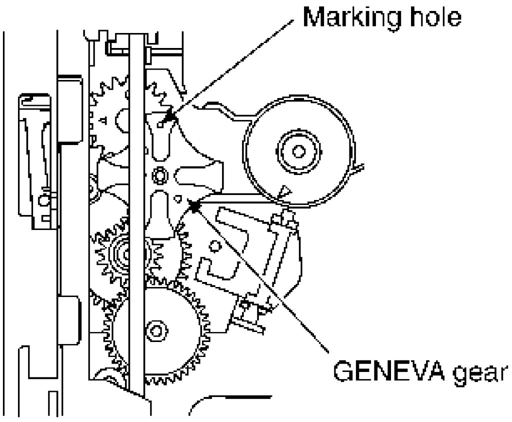

Change lever
Hook
Hook

### (Step 23)

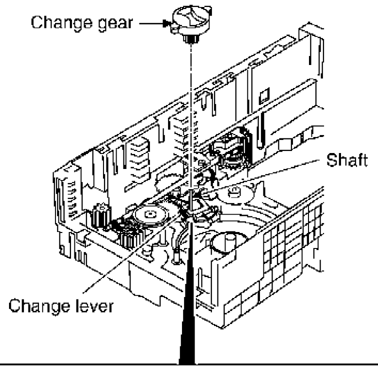
Be sure the notice of bellow before fixing the change gear.

1. Select track should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.

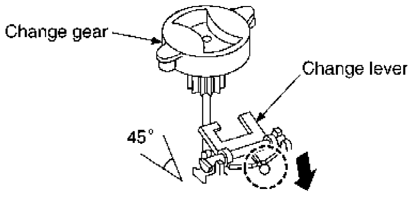

(Rear side)
Select rack


Marking hole
GENEVA gear

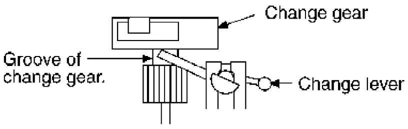
**(Step 24)**
Install the change gear as insert the change lever into the groove of change gear.


Change gear
Shaft
Change lever

1. Pushing the ○ part and pull up the change lever 45°.

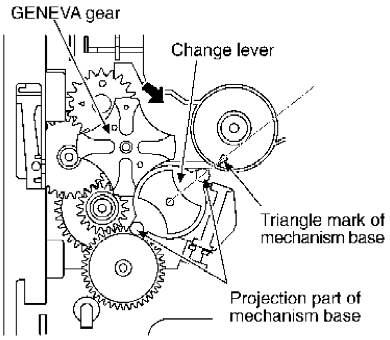

Change gear
Change lever
45°

2. Insert the change lever into the groove of change gear.

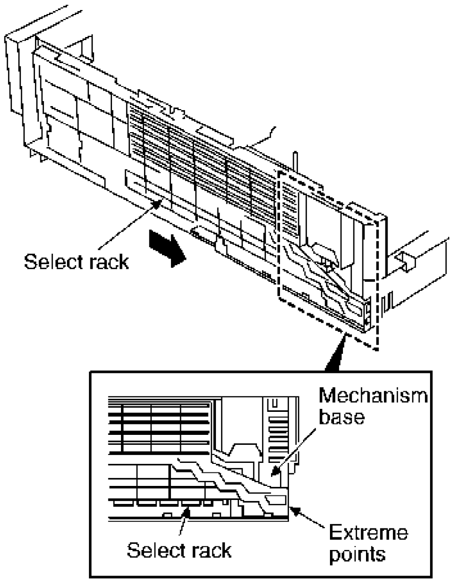

Change gear
Groove of change gear.
Change lever

**(Step 25)**
Put change gear down with projection part of change gear fitted to triangle mark of mechanism base, when fixing change gear.
At that time, check change gear is inserted into the groove of change lever.

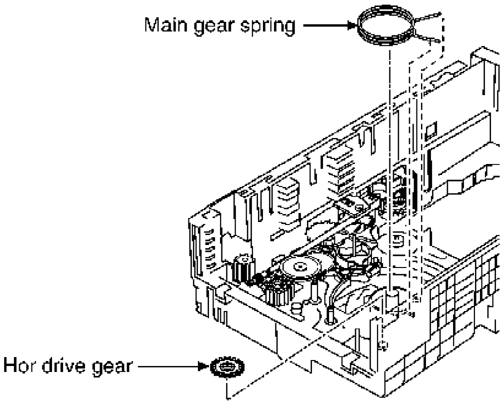
**(Step 26)**
Lastly, turn GENEVA gear clockwise slightly and drop change gear to mechanism base.

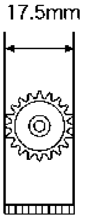

GENEVA gear
Change lever
Triangle mark of mechanism base
Projection part of mechanism base

**(Step 27)**
Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.


Select rack
Mechanism base
Select rack
Extreme points

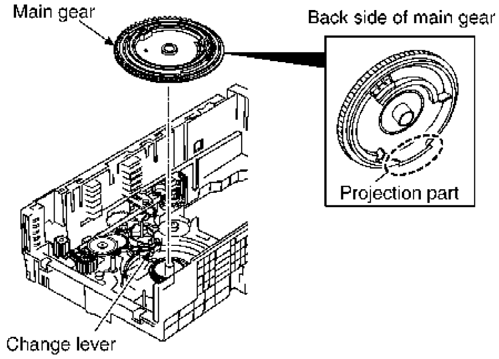
**(Step 28)**
Install the main gear spring and hor drive gear.


Main gear spring
Hor drive gear

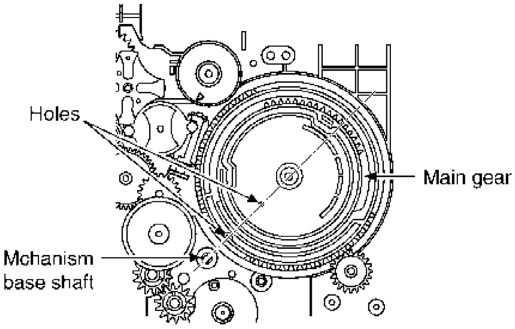


Hor drive gear
(White)

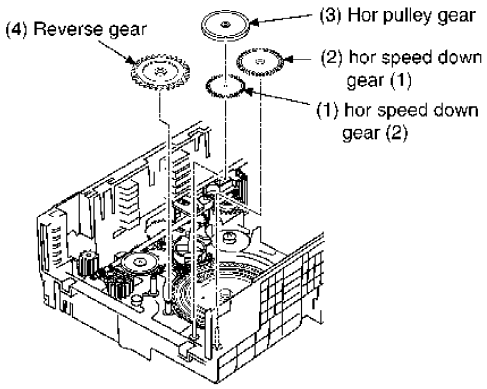
**(Step 29)**
Don't bring change lever into touch to projection part of main gear, when fixing main gear in mechanism base.

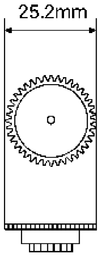

Main gear
Back side of main gear
Projection part
Change lever

**(Step 30)**
After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism base.

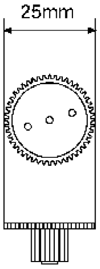

Holes
Main gear
Mchanism
base shaft

**(Step 31)**
Install the hor speed down gear (2), hor speed down gear (1), hor pullry gear and reverse gear.

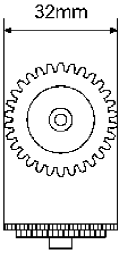

(4) Reverse gear
(3) Hor pulley gear
(2) hor speed down gear (1)
(1) hor speed down gear (2)



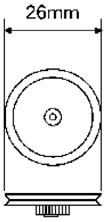
Hor speed down gear (2) (White)



Hor speed down gear (1) (Semi-transparent)



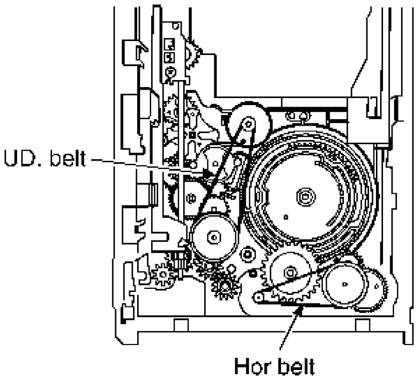
Reverse gear (White)



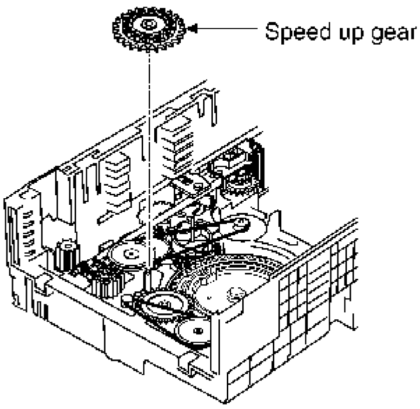
Hor pulley gear (White)

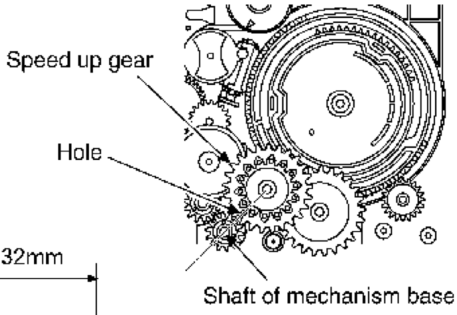
**(Step 32)**
Install the UD. belt and hor belt.

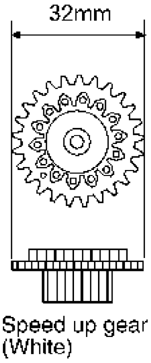
**NOTE:**
1. Take care not apply the grease to the belt.
2. Install the belt without twist.


UD. belt
Hor belt

**(Step 33)**
Install speed up gear to its shaft of mechanism base with 2 fitting.

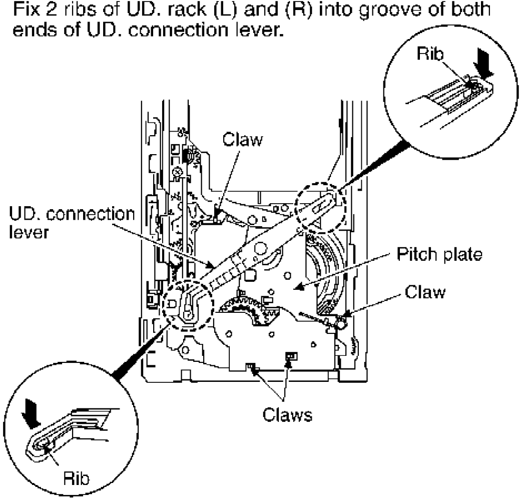

Speed up gear


Speed up gear
Hole
Shaft of mechanism base

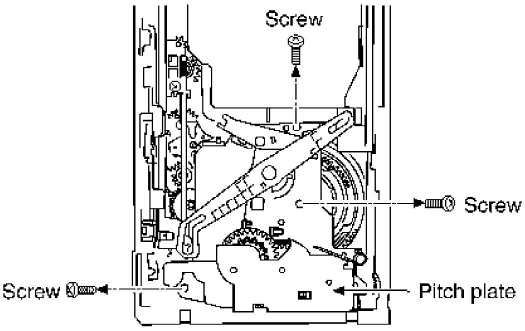

32mm
Speed up gear
(White)

**(Step 34)**
Install the pitch plate. (The 4 claws should be latched.)

**(Step 35)**
Fix 2 ribs of UD. rack (L) and (R) into groove of both ends of UD. connection lever.

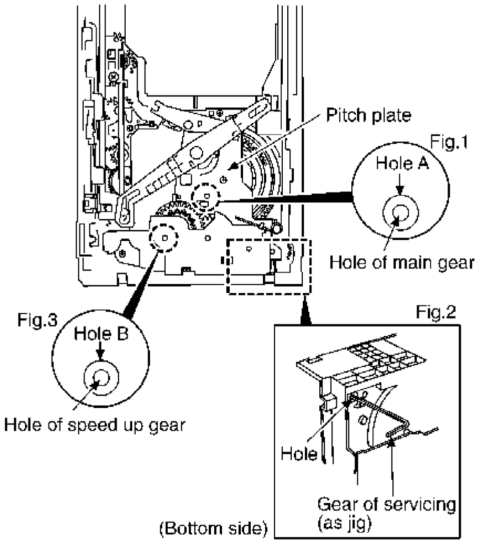

Rib
Claw
UD. connection
lever
Pitch plate
Claw
Claws
Rib

**(Step 36)**
Fixed it by three screws further.

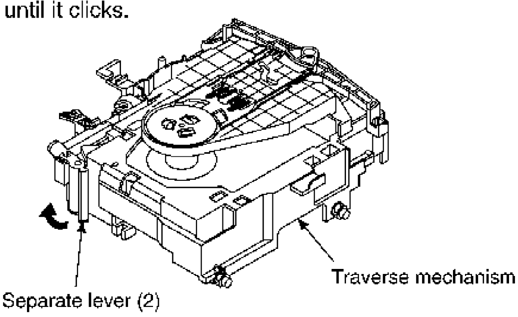

Screw
Screw
Screw
Pitch plate

**(Step 37)**
Be sure the notice of below before fixing the traverse mechanism.

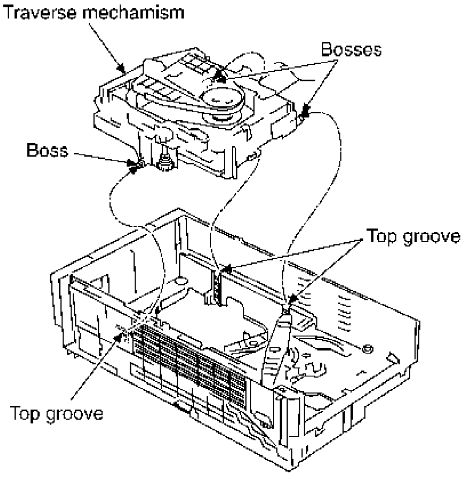
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.


Pitch plate
Fig.1
Hole A
Hole of main gear
Fig.3
Hole B
Hole of speed up gear
Fig.2
Hole
Gear of servicing
(as jig)
(Bottom side)

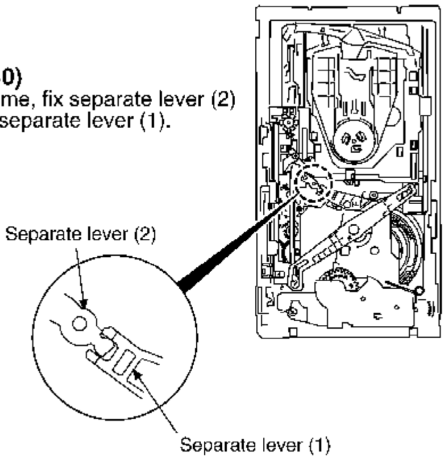
**(Step 38)**
Turn the separate lever (2) slowly toward left side until it clicks.


Traverse mechanism
Separate lever (2)

**(Step 39)**
Fix the left boss into the top groove of the UD. rack (L) and fix 2 bosses into the groove of the UD. rack (R).

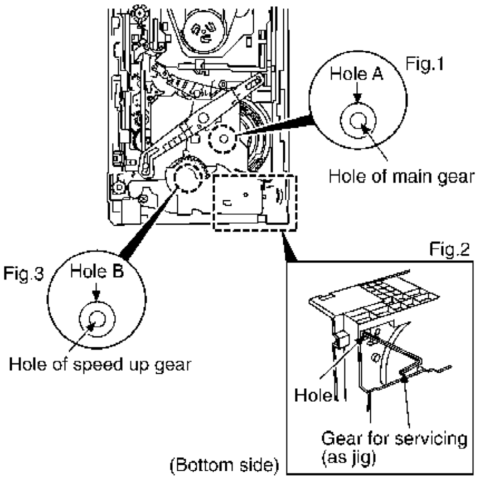

Traverse mechamism
Bosses
Boss
Top groove
Top groove

**(Step 40)**
At that time, fix separate lever (2) into the separate lever (1).

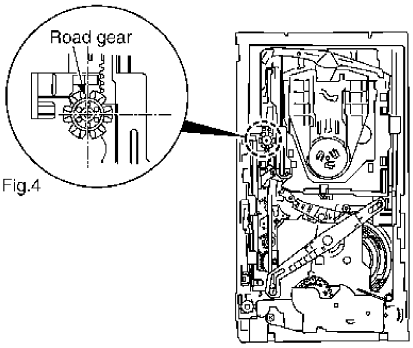

Separate lever (2)
Separate lever (1)

**(Step 41)**
After the traverse mechanism fixed,
confirm the phase in order below.

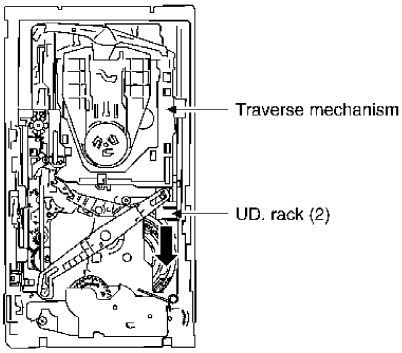
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.


Hole A
Fig.1
Hole of main gear
Fig.2
Fig.3
Hole B
Hole of speed up gear
Hole
Gear for servicing
(as jig)
(Bottom side)

3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)
   Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.
   NOTE: By this time, do not adjust to rotate the road gear.

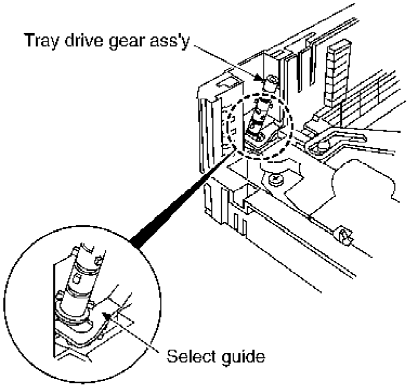

Road gear
Fig.4

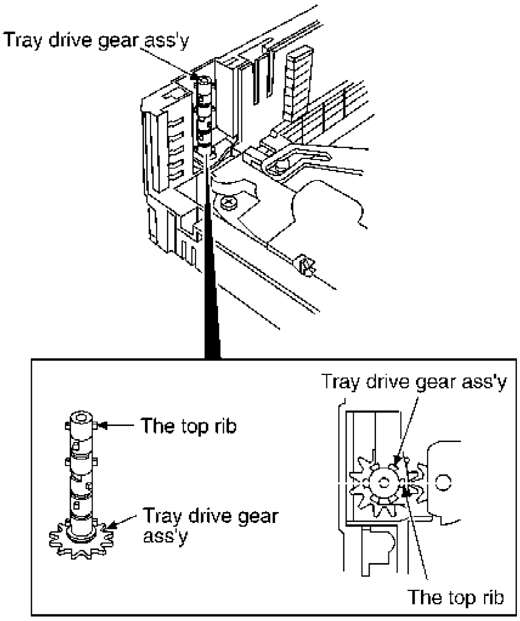
**(Step 42)**
After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.


Traverse mechanism
UD. rack (2)

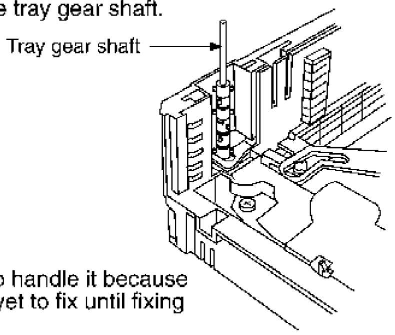
**(Step 43)**
Install the tray drive gear to select guide.
(Install the top rib of the tray drive gear with side ward.)

**NOTE:**
Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).


Tray drive gear ass'y
Select guide

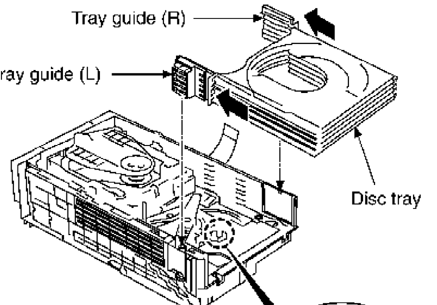

Tray drive gear ass'y
Tray drive gear ass'y
The top rib
Tray drive gear ass'y
The top rib

**(Step 44)**
Insert the tray gear shaft.


Tray gear shaft

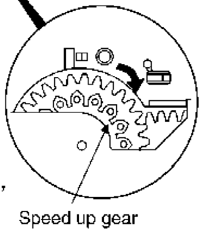
**NOTE:**
Be careful to handle it because the shaft is yet to fix until fixing top cover.

**(Step 45)**
Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.


Tray guide (R)
Tray guide (L)
Disc tray

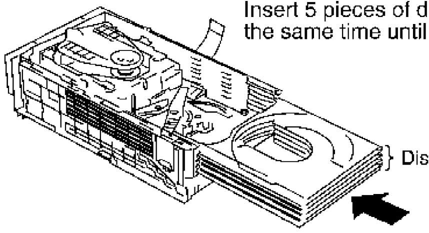
**(Step 46)**
Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.

- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rorate, repeat from Step 45 and 46.


Speed up gear

**NOTE:**
While keeping all postion, install 5 pieces of disc tray.

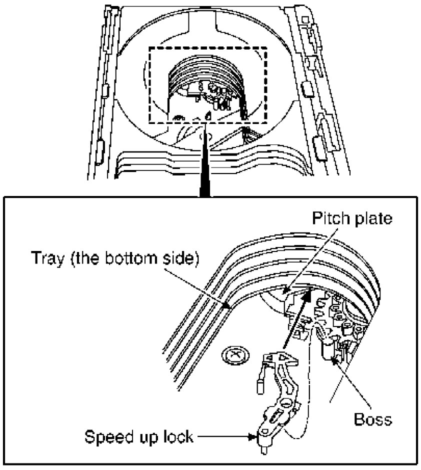
**(Step 47)**
Insert 5 pieces of disc tray at the same time until it's stop.



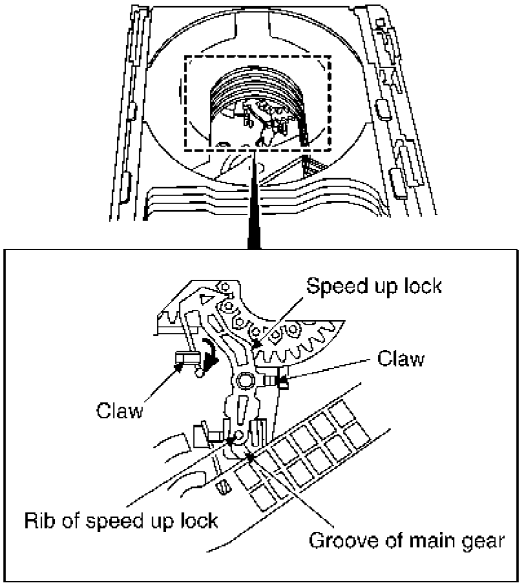
**(Step 48)**
Turn the traverse side 180°.

**(Step 49)**
While install the tip of speed up lock beween tray (No.1) of the most lower side and pitch plate for the time being.
(Do not to insert the cog of speed up gear), insert it to boss.

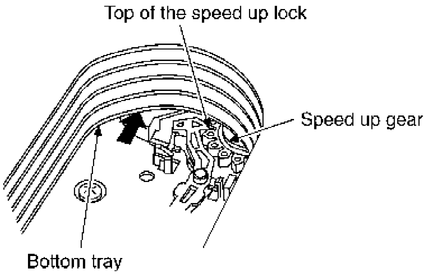
**NOTE:**
At that time, do not move the tray.
(See the tray the most front side)


Pitch plate
Tray (the bottom side)
Boss
Speed up lock

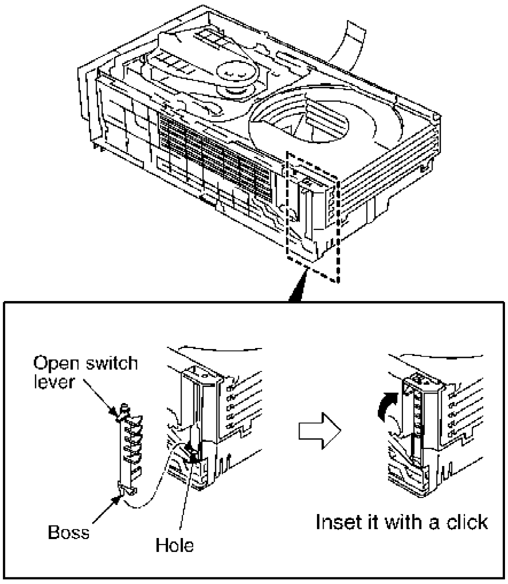
**(Step 50)**
Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.


Speed up lock
Claw
Claw
Rib of speed up lock
Groove of main gear

**(Step 51)**
Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.

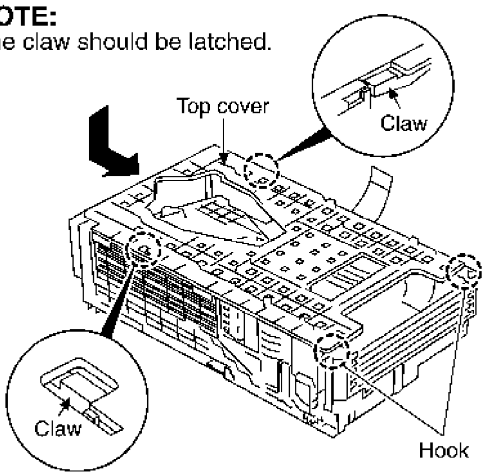

Top of the speed up lock
Speed up gear
Bottom tray

**(Step 52)**
Install the open switch lever.
(Put the boss into the hole of the mechanism base.)


Open switch lever
Boss
Hole
Inset it with a click

**(Step 53)**
Install the top cover.
Fix it into hooks and slide direction to the arrow.

**NOTE:**
The claw should be latched.


Top cover
Claw
Claw
Hook

## 11.26. Disassembly of traverse mechanism

**- Follow the (Step 1) - (Step 6) of Item 11.2.**

**- Follow the (Step 1) - (Step 3) of Item 11.3.**

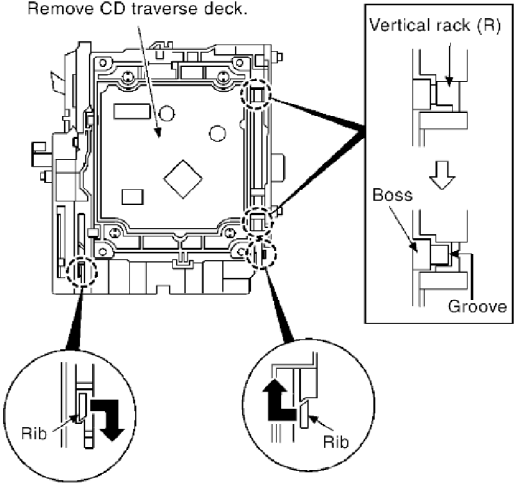
**- Follow the (Step 1) - (Step 4) of Item 11.5.**

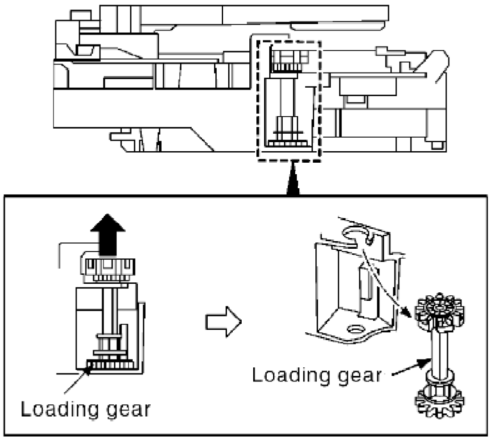
**- Follow the (Step 1) - (Step 5) of Item 11.13.**

**- Follow the (Step 1) - (Step 2) of Item 11.20.**

Step 1
Shift ribs of both side to the arrow direction.
(A vertical rack (R) slides and groove opens)

Step 2
Remove CD traverse deck.

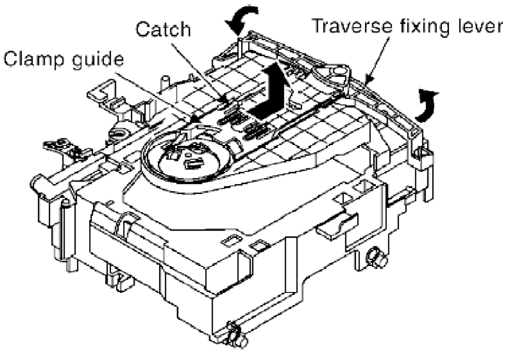

Vertical rack (R)
Boss
Groove
Rib
Rib


Loading gear
Loading gear

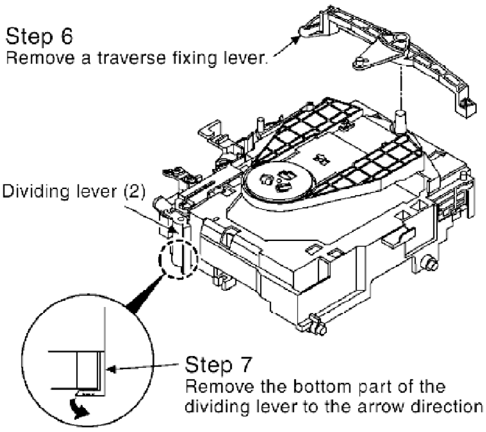
Step 3
Lift a loading gear slightly and pull out.

Step 4
Fixing lever to the arrow direction, rotate a traverse.

Step 5
Remove catch and take out a clamp guide.

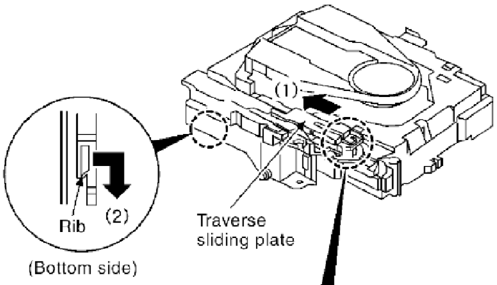

Catch
Traverse fixing lever
Clamp guide

Step 6
Remove a traverse fixing lever.

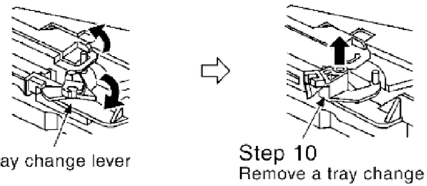

Dividing lever (2)

Step 7
Remove the bottom part of the dividing lever to the arrow direction.

Step 8
Slide a traverse sliding plate to the arrow direction (1), and shift a rib to the arrow direction (2).

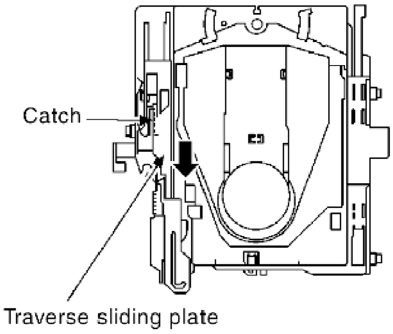

(1)
Rib
(2)
Traverse sliding plate
(Bottom side)

Step 9
Shifting a traverse sliding plate slightly and rotate a tray change lever.


Tray change lever

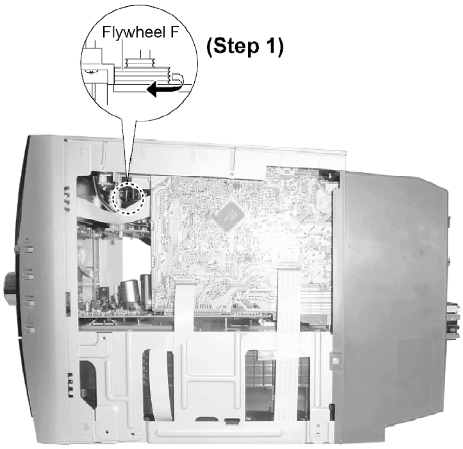
Step 10
Remove a tray change lever.

Step 11
Holding the catch down, slide a traverse sliding plate to the arrow direction and remove it.

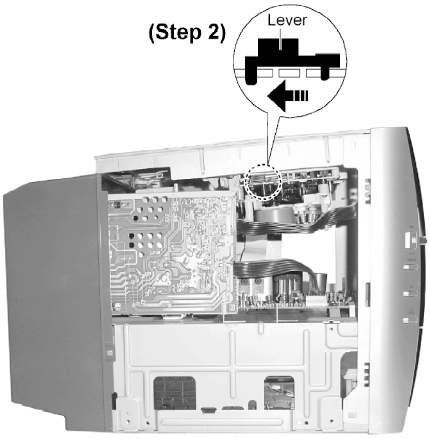

Catch
Traverse sliding plate

## 11.27. Handling of Cassette Tape jam

**- Follow the (Step 1) - (Step 6) of Item 11.2.**



**Step 1 : If the cassette tape cannot eject due to twinning around capstan or pinch roller during play or record, rotate the flywheel F as arrow shown to remove twined tape.**



**Step 2 : Push the lever as arrow shown to open the cassette lid and remove the cassette tape.**

# 12. Service Positions

## 12.1. Checking procedure

**Note : For the disassembling procedure, see the section 11.**

## 12.2. Checking the major P.C.B.

### 1. Disassembly of Side Panel L & R

### 2. Disassembly of Top Cabinet

### 3. Disassembly of Deck P.C.B. and Tape Eject P.C.B.

### 4. Disassembly of Front Panel

### 5. Disassembly of Main Control P.C.B., Function P.C.B. and Power-In P.C.B.

### 6. Disassembly of Panel P.C.B.

## 7. Disassembly of Rear Panel P.C.B.

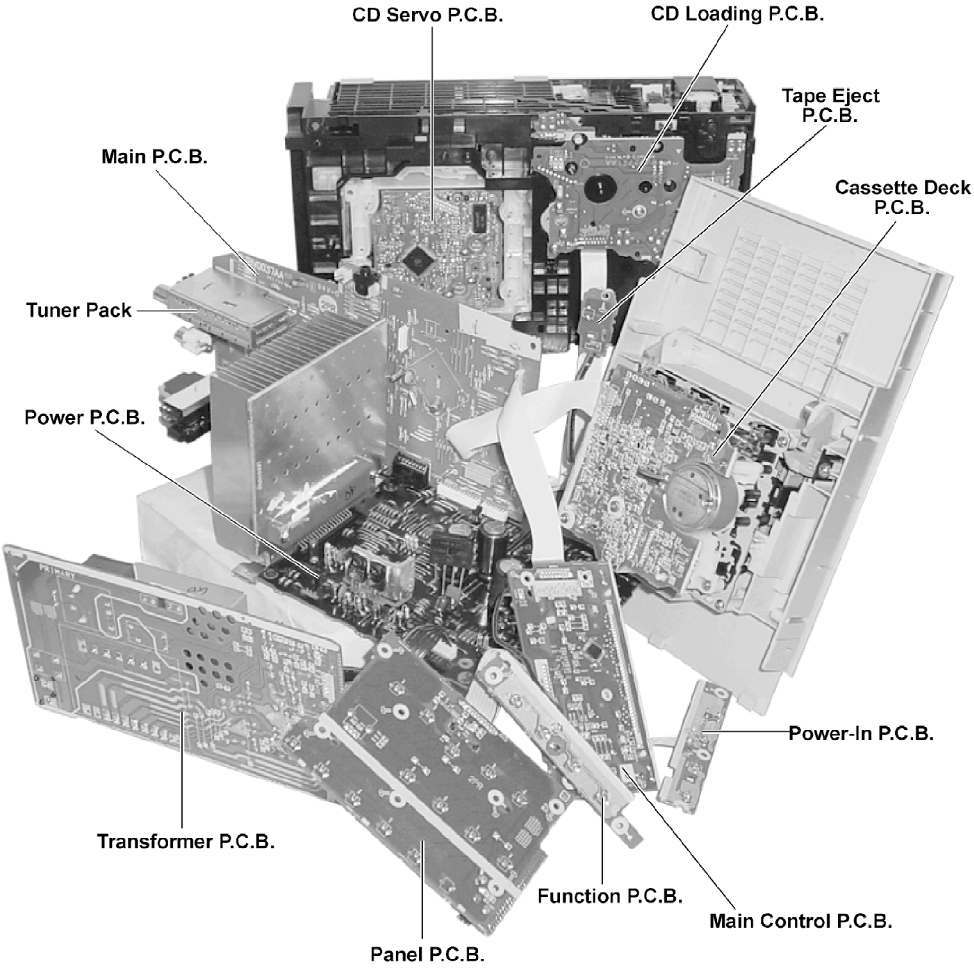
## 8. Disassembly of Main P.C.B.

## 9. Disassembly of Transformer P.C.B.

## 10. Disassembly of Tuner Pack.

## 11. Disassembly of Power P.C.B.

## 12. Disassembly of CR16 Mechanism


CD Servo P.C.B.
CD Loading P.C.B.
Tape Eject P.C.B.
Main P.C.B.
Cassette Deck P.C.B.
Tuner Pack
Power P.C.B.
Power-In P.C.B.
Transformer P.C.B.
Function P.C.B.
Main Control P.C.B.
Panel P.C.B.

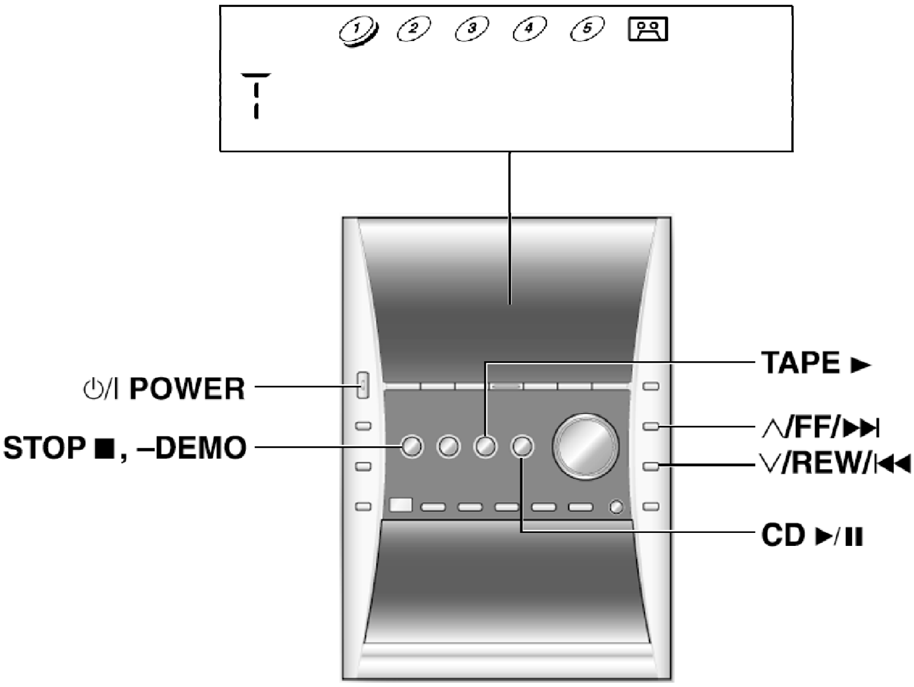
# 13. Self-Diagnostic Display Function

**This unit is equipped with a self-diagnostic display function, which will be useful during servicing and maintenance.**

## 13.1. Entering into Self-Diagnostic Mode

### 13.1.1. Setting of the Self-Diagnostic Mode (Test Mode)

| No. | Operation Procedure | Operation and Processing of Microcompute |
|---|---|---|
| 1 | Switch the SELECTOR to TAPE ▶ .<br>There should be NO cassettes loaded. | |
| 2 | Press the [STOP ■ /-DEMO] key for 2 sec and press [ ∧ /FF/ ▶▶\| ] for another 2 sec, it shall enter into the self-diagnostic mode. | [T ] shall be displayed in the FL. |

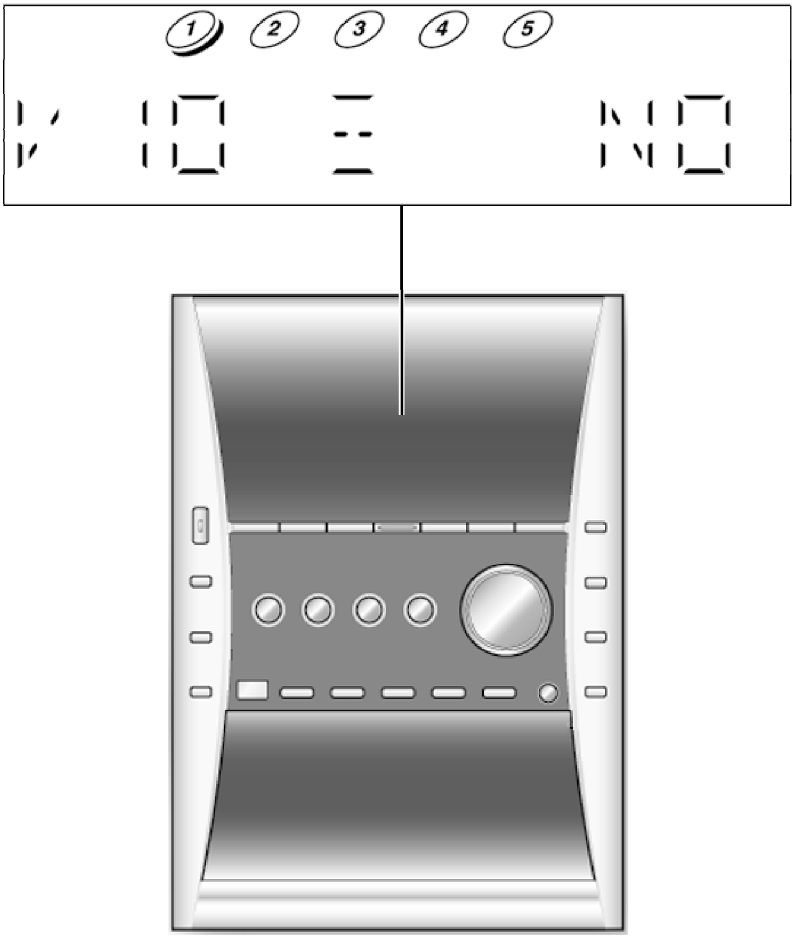


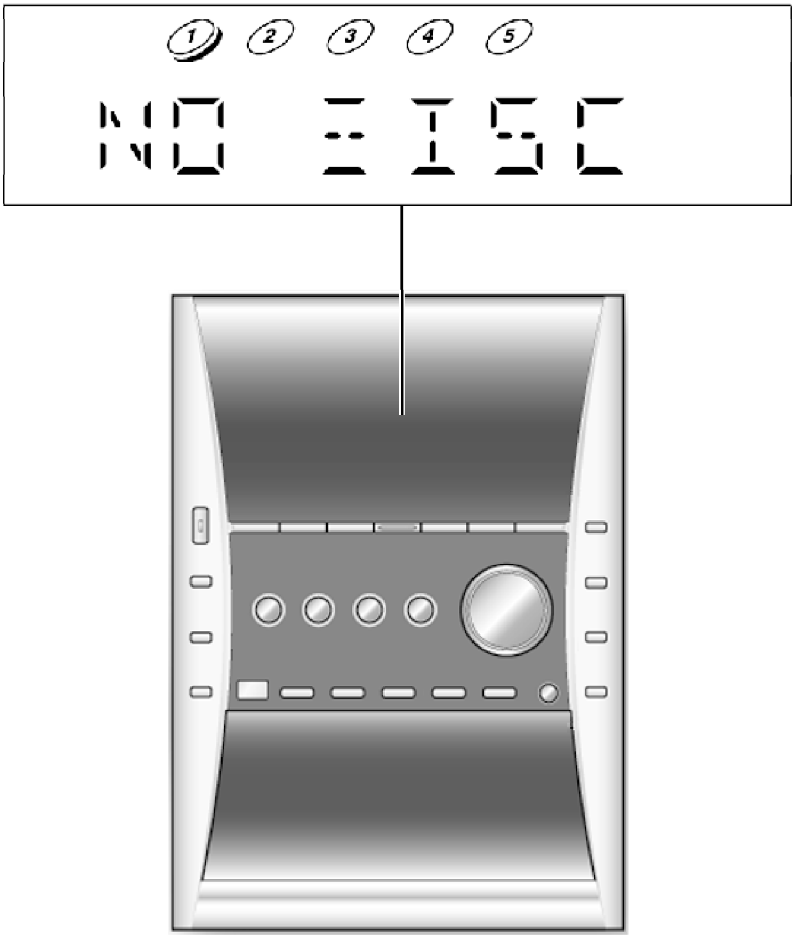
## 13.1.2. Setting of Self-Diagnostic (Doctor Mode)

**a) Turn on power for unit.**

**b) Select CD Mode. Ensure no disc is inserted in the unit.**

**c) Press and hold [STOP ■ /-DEMO] button for at least 2 seconds, follow by [4] and [7] on remote control. In the case where there is EEPROM, then, the display should be as below: This display shall be there for 1sec. After display the EEPROM information for 1sec, the display shall return to the normal Doctor Mode display.**





**d) Power down to exit by pressing [⏻/I] button on the main unit.**
**e) The CLEAR key on the remote controller when used in any test items mode shall end the current test, operations and exit Doctor Mode.**

### 13.1.3. Check Sum Display of EEPROM

**- The check sum of EEPROM.**

**- When the operation which enters the doctor mode in the doctor mode is done, version No. of EEPROM; It is (DEC display) and a check sum (HEX display).**

**1. Doctor mode ON.**

**2. Pressing "C2DF"**
**The following are displayed:**
**CHECKSUM [CHK-EA]**

**Note: Version/check sum displays '. . . . . . CHK-NO' when display, when judged that there is EEPROM, and judged it is not.**

**- It returns to the doctor mode display of usually by the operation**

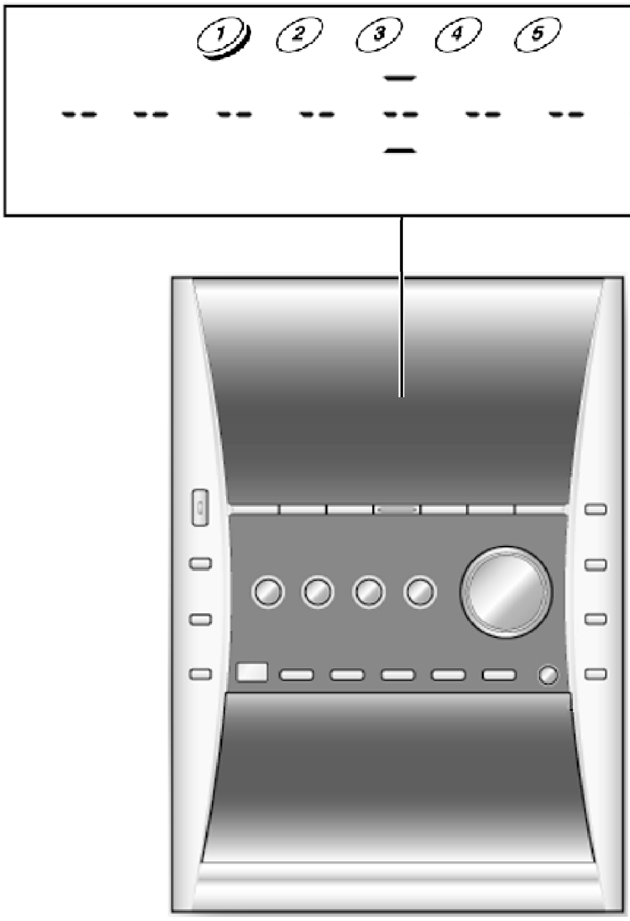
which enters the doctor mode of usually by the operation which enters the doctor mode again with the check sum displayed. (The display does not return by the time limitation)

### 13.1.4. Cold start setting

1. Doctor mode ON.

2. Press [4] button on the remote control.

- Data shall be set in order to make a cold start (backup data are initialized) when reset starts next time.
  To clarify that the code was accepted at this time, the pattern below is displayed in the LCD for 2 seconds.



(Note) In the case that you unplug from AC outlet after this mode was set, then plug to AC again, a cold start shall begin. / And “- - - - - - - - -” is displayed in the FL for 2 seconds.

## 13.2. Clearing Self-Diagnostic Memory

**<CD Section> (F15, F17, F22, F26, F27, F28, F29)**

1. **Enter into self-diagnostic mode.**
2. **Errors are stored in the unit memory. To clear memory, press and hold down "STOP ■ /-DEMO" button for 5 seconds or more during self-diagnostic mode. The message, "CLEAR" appears on the display when memory is erased, and the unit displays the message, "T".**
   **Memory is not affected by turning off the power or unplugging the socket.**
   **Be sure to clear memory after repair is completed.**
3. **Press "STOP ■ /-DEMO" button. A symbol of self-diagnostic is indicated on the display if an error is found. If several errors are found, a respective indication is displayed when "STOP ■ /-DEMO" button is pressing repeatedly. (e.g. H01 → CD F15 → F01)**
   **If no error is found, only "T " indication is displayed and remains unchange even if "STOP ■ /-DEMO" button is pressed.**

## 13.3. Displaying Self-Diagnostic Results

**<Cassette Deck Section> (H01, H02, H03, F01, F02)**

1. **Enter the self-diagnostic mode, following the instructions described in [13.1.1 Setting of the Self-Diagnostic Mode (Test Mode)].**
2. **Insert a normal-positioned music tape with erase prevention niches on both Sides A and B. Press [TAPE ▶ ] button to activate the TPS operation so that the tape automatically stops at an interval between music selections.**
3. **Press [CLEAR ■ ] and [TAPE ▶ ] buttons together on the remote controller. (Recording does not start.)**
4. **Then, insert a Cr02-positioned blank cassette tape with an erase prevention niche of Side A or B set to the left side.**
5. **Press [ ∧ /FF/ ▶▶| ] button. The tape will be forwarded and automatically stop after two seconds.**

**6. Remove the cassette tape, and set the other side.**

**7. Press [ ∨ /REW/ ⏮ ] button. The tape will be rewound and automatically stops after two seconds.**

**8. Press [STOP ■ /-DEMO] button on the unit.**
**If an error is found, a self-diagnostic key appears on the display. If several errors are found, the display shows these keys when [STOP ■ /-DEMO] button is pressed repeatedly. (Ex.: H01 - H02 - F01 - H01)**
**If no error is found, only the message, “T” appears on the display.**

**(*1) TPS operation (music search) detects the blank sections between music selections. Therefore, do not use tapes with the following conditions:**

- **A blank section that lasts only 4 seconds or less.**
- **No blank sections (recording through microphones, etc.).**
- **Music selections that have extremely low pitches or prolonged silent sections (such as classical music).**
- **and/or Music recorded with fade in/out effect.**

## 13.4. Error Code Table

### 13.4.1. Error code for Power Supply

| Error Code | Abnormal Items | Possible Cause |
|---|---|---|
| F61 | POWER AMP output / abnormal | During normal operation, if either DCDET1 or DCDET2 becor normal POWER OFF process shall not be executed, PCNT sl switched to L immediately. GOODBYE shall not display and display F61 is displayed instead. 2 seconds after the F61 dis ECONO shall be set to 'L' and LCD display shall be turned of error content shall be memorised when the abnormality occu can be display in the C-mecha self-diagnostic mode describ |

### 13.4.2. Error codes for CD Mechanism

| Error Code | Abnormal Items | Possible Cause |
|---|---|---|
| F15 | CD REST SW abnormal | CD traverse position initial setting operation failsafe counter waiting for REST SW to turn on. Error No. shall be clear by f during coldstart. |
| F26 | CD servo LSI command signal abnormal | CD function DTMS command, after system setting, If SENSE cannot be detected. Memory shall contain F26 code. After P CD function shall continue, error shall occur “NO DISC”. Error No. shall be clear by force or coldstart. |
| F28 | DISC LOAD abnormal | While going to play position, if failsafe counter is finished a no change or switch target condition was not achieve, this e be memorized. Next time mechanism operates, it shall do co Error No. shall be clear by force or coldstart. |
| F29 | DISC unload abnormal | While going to play position, if failsafe counter is finished a no change or switch target condition was not achieve, this e be memorized. Next time mechanism operates, it shall do co Error No. shall be clear by force or coldstart. |
| F27 | Slide operation abnormal | During vertical operation, if failsafe timer is finished and swi change or switch target condition was not achieve, this erro memorized. Next time mechanism operates, it shall do colds No. shall be clear by force or coldstart. |
| F17 | Down SW abnormal | During vertical operation going to the bottom position, if fail is finished and switch no change or switch target condition achieve, this error shall be memorized. The Next time mecha operates, it shall do mechanism initialization.Error No. shall by force or coldstart. |
| F22 | Loading Mode / Mecha abnormal | During mecha initialization, Loading mode mechanism abno normal operation cannot be achieve. The next time mechani operates, it shall do mechanism initialization.Error No. shall by force or coldstart. |

### 13.4.3. Error codes for Cassette Mechanism

| Error Code | Abnormal Items | Possible Cause |
|---|---|---|
| H01 | MODE SW abnormal | Normal operation during mecha transition, MODE SW abno memorised. The content of abnormality can be confirmed i abnormal detection mode explained in the later section. |
| H02 | REC INH SW abnormal | The content of abnormality can be confirmed in the abnorm detection mode explained in the later section. |
| H03 | HALF SW abnormal | |
| F01 | Reel pulse abnormal | |
| F02 | TPS abnormal | |

## 13.5. Cassette Mechanism Self-Diagnostic Mode

1. A Cr02-positioned blank cassette tape with an erase prevention niche on either Side A or B.
2. A normal-positioned music tape with erase prevention niches on

both Sides A and B. Both tapes are halfway forwarded in advance.

3. The remote controller that comes with this unit.

| No. | Operation Procedures | Micon operation & processing |
|---|---|---|
| 1 | C-mecha Abnormal Detection shall be executed for DECK 1 only. | Check that all DECK mechanism leaf SW are in OFF |
| 2 | [ ▶▶\| ] key is pressed, after loading in a NORMAL type cassette with the recording tab on the left side removed. | FF shall be executed for 2 sec, after which STOP. / Check the following. / { F.REC INH SW } is OFF / { F INH SW } is ON / { HALF SW } is ON / Reel pulse tog between H & L. |
| 3 | [ \|◀◀ ] key is pressed, after loading a NORMAL, CrO2, METAL type cassette with the recording tab on the right side removed. | REW shall be executed for 2 sec, after which STOP. Check the following. / { F.REC INH SW } is ON / { R. INH SW } is OFF / { HALF SW } is ON / Reel pulse toggles between H & L. |
| 4 | [TAPE ▶ ] Key is pressed, after loading in a NORMAL, CrO2, METAL type cassette ( cassette for TPS checking purposes and with both recording tabs intact ). | TPS operation is executed. Check the following. / { F.REC INH SW } is ON / { R.REC INH SW } is ON / { HALF SW } is ON / TPS signal changes. / After chec TPS, it shall STOP. / If TPS checking is completed a TAPE END, it is considered as TPS abnormal. |
| 5 | [REC] key is pressed, after loading in a NORMAL type cassette ( with both recording tabs intact ) | REC operation shall not be executed. / Check the following. / { F.REC INH SW } is ON / { R.REC INH S is ON / { HALF SW } is ON |
| 6 | Self-diagnostic mode is stopped by pressing the [Clear ■ ] Key. | LCD shall display the abnormality item code, when [Clear ■ ] key is pressed, it shall display the abnormality item code in the following sequence. / [ 0 1 ] [ T H 0 2 ] [ T H 0 3 ] |
| 7 | To clear all the abnormalities in the memory, press the [Clear ■ ] Key for more than 5 sec while the self-diagnostic mode is stopped. | At this time, all the abnormalities item in the memor cleared and is displayed on the LCD. [ C L E A R ] di for 1 sec. then, [ T ] is displayed. |
| 8 | To cancel the self-diagnostic mode press the [POWER] Key. | POWER is OFF. At the next POWER ON, normal operation shall be executed. |

- If RAM check error occurs during microcomputer reset, COLDSTART shall be executed and all the error memory shall be cleared during RAM initialization.

## 13.6. Changer Reliability Test Mode

1. Doctor mode ON.

2. Press [2] on the remote control.

3. The flow below shall be done

* During ageing test mode, press [STOP] button on remote control or main unit to stop the operation.

- During this series of operation, the number of its operation shall be shown in the alphanumeric display repeatedly.
  It shall start from [ _ _ 00001]
- It shall move up one counter when step 1~8 of the above operations end.
  It shall display [ _ _ 00000] after [ _ _ 99999] has been reached.
- Press POWER key, tray return to PLAY position and then POWER is OFF.

During test mode, if mecha operation encounters abnormality or time over , retry operation shall be done but aging test mode shall stop

## 13.7. Changer Operation Checking

1. Doctor mode ON.

2. Press [DISC] key to ON

Current disc setting shall be tray 1
A. tray 1 load, tray 2 open then close
B. tray 1 load, tray 3 open then close
C. tray 1 load, tray 4 open then close
D. tray 1 load, tray 5 open then close
E. tray 1 load, while playing CD check mode 4 disc then close
F. tray 1 stop unload
G. CD check mode and then close
H. tray 1 load
I. after the above process, [CHNGR_OK] shall be displayed

- During this series of operation, the number of its operation shall be shown in the alphanumeric display repeatedly.
  It shall start from [ _ _ 00001]
- It shall move up one counter when step 1~8 of the above operations end.
  It shall display [ _ _ 00000] after [ _ _ 99999] has been reached.
- Press POWER key, tray return to PLAY position and then POWER is OFF.

During test mode, if mecha operation encounters abnormality or time over, retry operation shall be done but ageing test mode shall stop

### 13.8. CR16 Mechanism Ageing Mode

**To enter into ageing mode:**

1. **Enter into Doctor mode.**
2. **Press [2] button on the remote control. It enters into ageing mode.**

**Ageing process:**

1. **Tray 1 open.**
2. **It waits for 1 second (Note: Do not put any disc into the tray).**
3. **Tray 1 close.**
4. **TOC READ (Reading incomplete).**
5. **Tray 2 open and repeat process 1 to 4. (Process repeat until Tray 5).**
6. **Tray check.**
7. **Whole process complete (Counter on FL increased by 1).**

**Note: To exit ageing mode, press [⏻/I] button. The unit will power down. Do not unplug the power cord until FL display shows "GOODBYE". This is to avoid tray jam problem.**

| | | |
|---|---|---|
| **Display Example:** | **[00000T3OP]** | **...TRAY OPEN** |
| | **[00000T3CL]** | **...TRAY CLOSE** |
| | **[00000T3RE]** | **...TOC READING** |
| | **[00000T3CH]** | **...TRAY CHANGING** |

# 14. Procedure for Checking Operation of Individual Parts of Cassette Mechanism Unit

## 14.1. Operation Check with Cassette Tape

1. **Pull up the EJECT lever using a rubber band. (Fig. 6)**
2. **Supply DC5V to MOTOR. ( → MOTOR rotates.) (Fig. 5)**
3. **Insert a cassette tape to the unit.**
4. **Supply DC9V to the plunger, and turn the power ON and OFF. ( → Power +PL, -PL) (Fig. 5)**
   - **A. FWD PLAY: Supply the plunger power in a flash. (ON: approx. 5msec)**
   - **B. FWD FF: Supply the plunger power in a flash at PLAY mode. (ON: approx. 5msec)**

**C. STOP: Supply the plunger power in a flash at FWD FF mode. (ON: approx. 5msec)**

**D. REV PLAY: Supply the plunger power in a normal timing at STOP mode. (ON: approx. 200msec)**

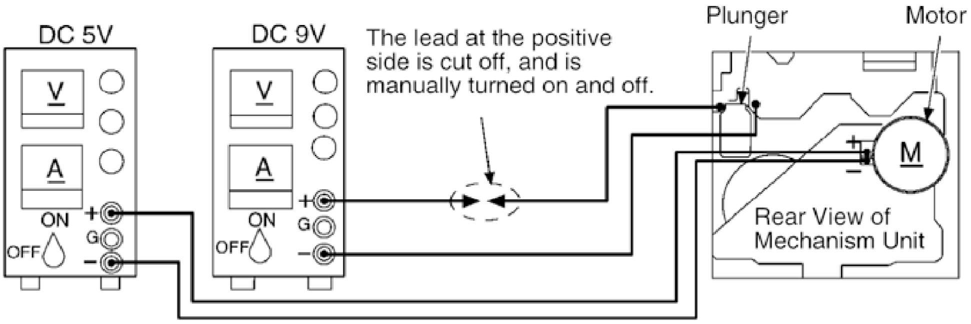
**E. REV REW: Supply the plunger power in a flash at REV PLAY mode. (ON: approx. 50msec)**

**F. STOP: Supply the plunger power in a flash at FF mode. (ON: approx. 50msec)**

**Repeat the operation ( → FWD PLAY)**

**(Note) Other operation may start if a timing of supplying the plunger power is missed.**

### 14.1.1. Connection Status between Mechanism and Power Supply (Motor, Plunger)

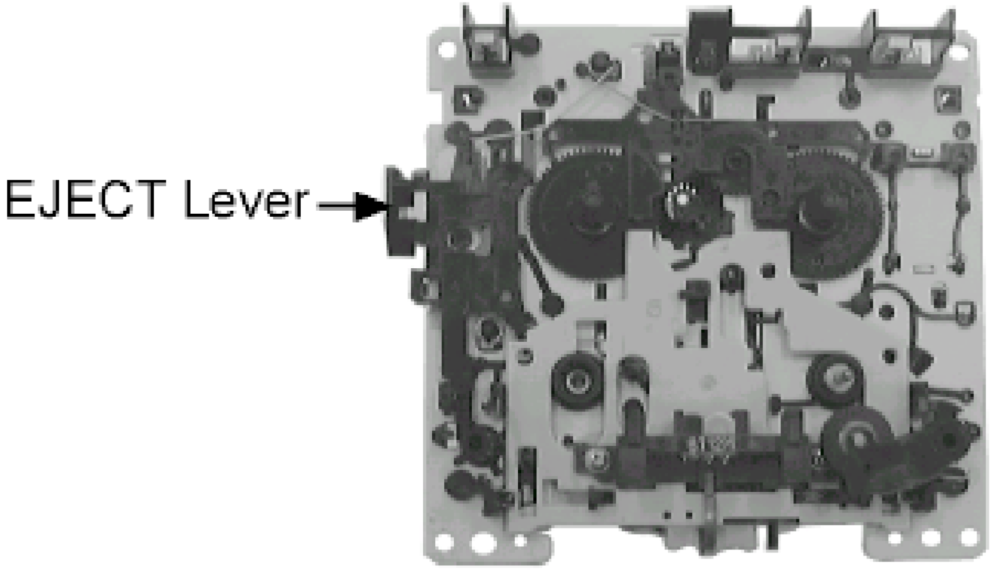


The lead at the positive side is cut off, and is manually turned on and off.

Fig. 5

### 14.1.2. Operative Parts of Mechanism Unit (EJECT lever fitted with rubber band, / Plunger/Rib operation)

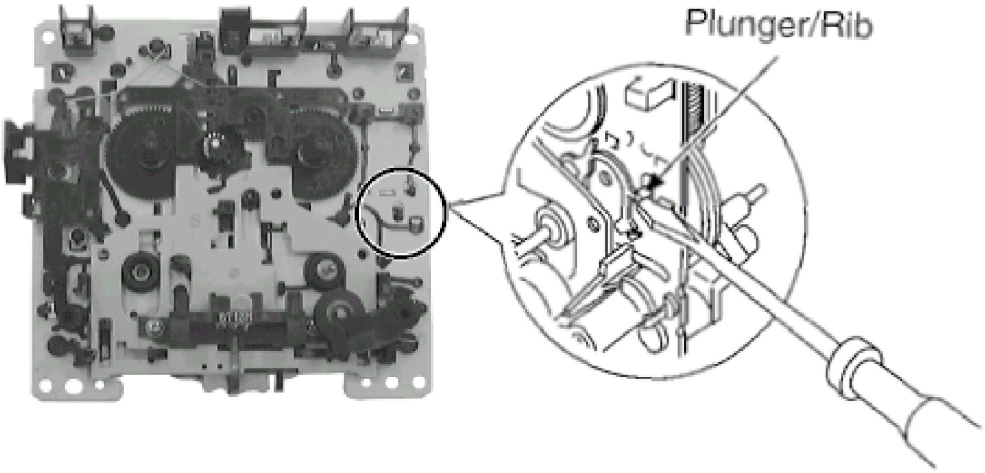
**Fig. 6**



## 14.2. Operation Check without Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Fig. 6)
2. Supply DC5V to MOTOR. ( → MOTOR rotates.)
3. Lift up the mechanism unit’s plunger/rib with the tip of a negative screwdriver, and operate the unit in the same timing as / supplying the power. (Fig. 7) /

Fig. 7



# 15. Measurement And Adjustments

## 15.1. Tuner/CD Sections

No adjustment required.

## 15.2. Cassette Deck Section

### 15.2.1. Requirements

- Test tape (QZZCFM) (QZZCWAT)
- Normal blank cassette tape (QZZCRA)
- Frequency indicator
- Oscilloscope
- Electrical voltmeter
- Headphone jack output jig (Fig. 8)

### 15.2.2. Setting of Unit

- VOLUME: MAX

### 15.2.3. Preparations

1. Apply [11. Assembling and Disassembling].
2. Remove 4 screws from the mechanism unit to disassemble. [11. Assembling and Disassembling].
3. Connect the headphone jack output jig (Fig. 8) to headphone jack.

Fig. 8

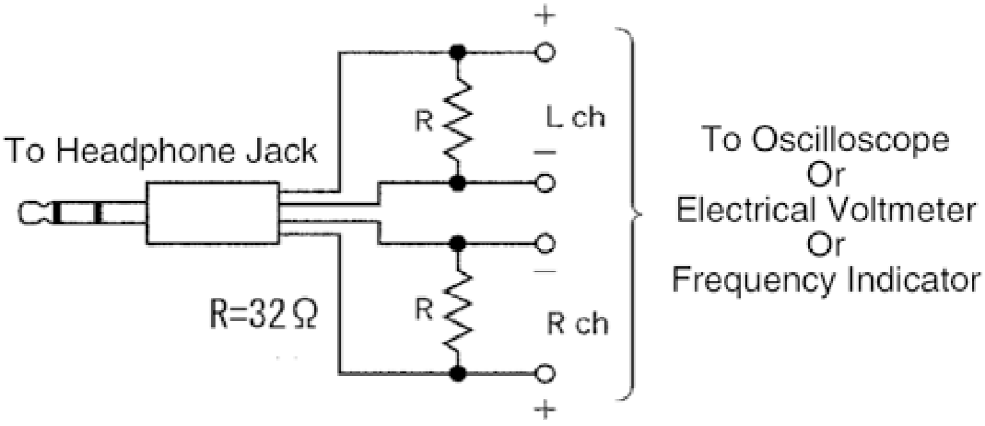
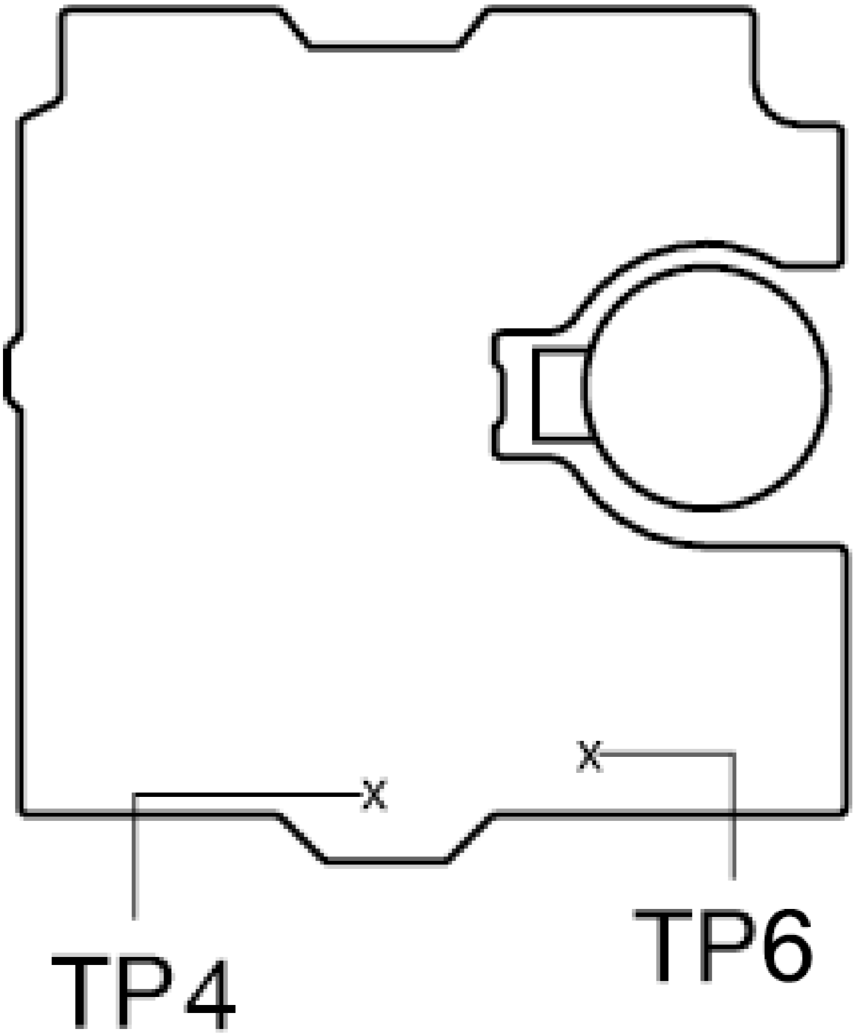

To Headphone Jack
R=32Ω
R
R
+
L ch
−
−
R ch
+
To Oscilloscope
Or
Electrical Voltmeter
Or
Frequency Indicator

Fig. 9



### 15.2.4. Tape Speed Adjustment

**- Normal speed adjustment (only during forward playback)**
**(Product reference value: 3,000±90Hz)**

**1. Connect a frequency indicator. (Fig. 12)**

**2. Playback the middle portion of the test tape (QZZCWAT).**

**3. Adjust the motor screw so that the following output level is produced. (Fig. 10)**
**Adjustment Range: 3,000 ± 90Hz (a constant speed)**

**Fig. 10**

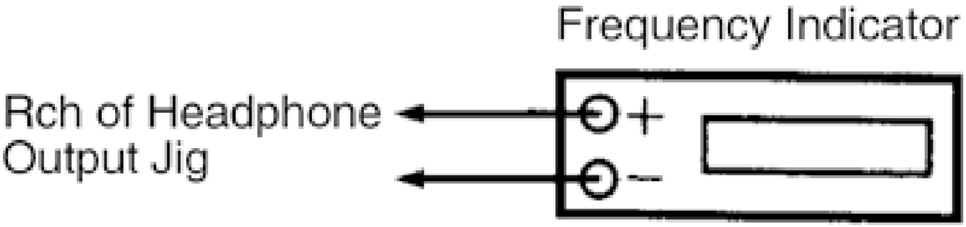
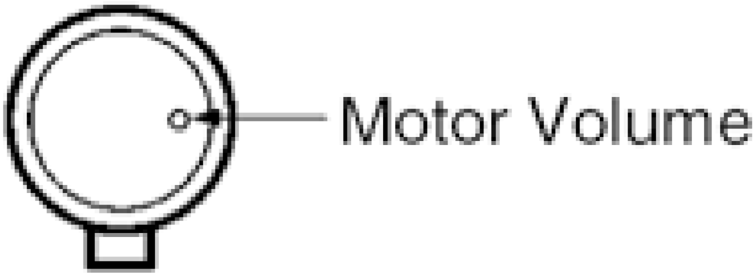

Frequency Indicator
Rch of Headphone Output Jig
+
–

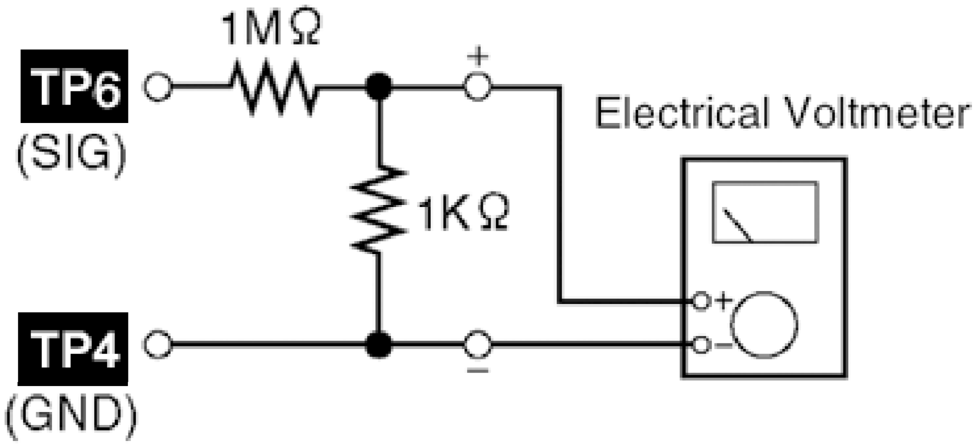
Fig. 11


Motor Volume

### 15.2.5. Bias Voltage Check

1. **Connect an electrical voltmeter. (Fig. 9) (Fig. 12)**
2. **Set the function to “TAPE” position.**
3. **Insert a normal blank cassette tape (QZZCRA).**
4. **While pressing and holding down [REC ( ● / ❚❚ )] button, press [TAPE ( ▶ )] button to pause the recording mode. (Repeat pressing the buttons till the recording pause mode is activated.)**
5. **Check that the output level is within the standard range.**
   **Standard Range: 13.5 ± 4mV**

Fig. 12

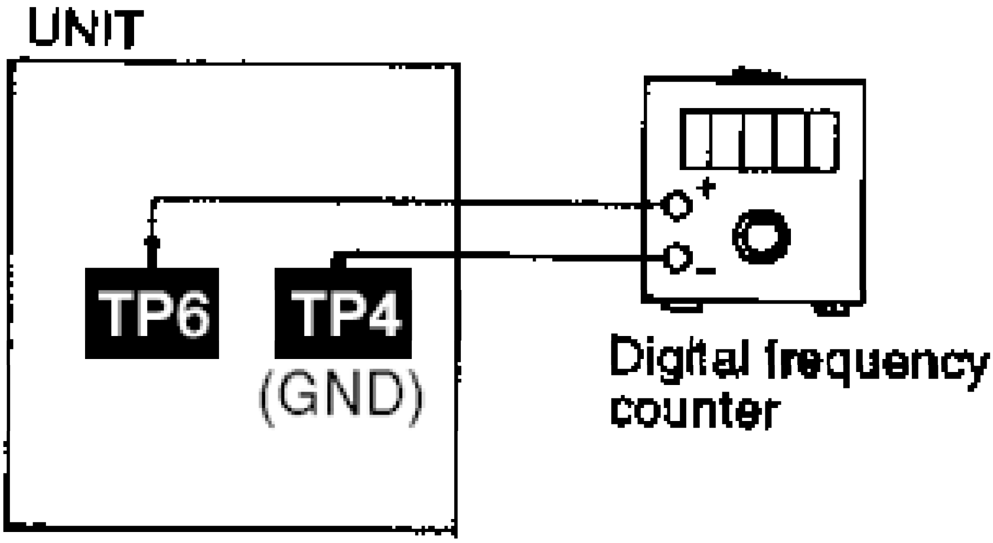

1MΩ
TP6
(SIG)
+
Electrical Voltmeter
1KΩ
+
TP4
(GND)
−
−

### 15.2.6. Bias Frequency Check

1. Connect a digital frequency counter (Fig. 13).
2. Set the function to “TAPE” position.
3. Insert a normal blank cassette tape (QZZCRA) and press “REC” mode on main unit.
4. Check that the output frequency is within the standard range.

| Standard Value: 98<br>±8 kHz |
|---|

Fig. 13


UNIT
TP6
TP4
(GND)
+
−
Digital frequency counter

## 16. Voltage Measurement and Waveform Chart

### 16.1. Waveform

## 17. Block Diagram

### 17.1. CD Servo Block

### 17.2. Main Block

## 18. Notes of Schematic Diagram

**(All schematic diagrams may be modified at any time with the development of new technology)**

**Note :**

**S1**

**Stock switch**

**S2**

**Play switch**

**S3**

**Bottom switch**

**S4**

**Open switch**

**S5**

**Change switch**

**S601**

**CD 1 switch**

**S602**

**CD 2 switch**

**S603**

**CD 3 switch**

**S604**

**CD 4 switch**

**S605**

**CD 5 switch**

**S606**

**CD Play/Pause switch**

**S607**

**Tape switch**

**S608**
**Tuner switch**

**S609**
**Track Up switch**

**S610**
**Track Down switch**

**S611**
**Album Up switch**

**S612**
**Album Down switch**

**S613**
**SSEQ switch**

**S614**
**Power switch**

**S615**
**Surround switch**

**S616**
**AUX switch**

**S617**
**CD Check switch**

**S618**
**Stop switch**

**S619**
**Open/Close switch**

**S620**
**CD Change switch**

**S621**
**REV switch**

**S622**
**FWD switch**

**S623**
**REC switch**

**S701**
**REST switch**

**S971**
**Mode switch**

**S972**
**Half switch**

**S973**
**CR02 switch**

**S975**
**Recinh_F switch**

**S1901**
**Tape Eject switch**

**VR600**
**Volume VR**

- **The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.**
- **Importance safety notice :**
  **Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.**

**Caution !**
**IC, LSI and VLSI are sensitive to static electricity.**
**Secondary trouble can be prevented by taking care during repair.**

- **Cover the parts boxes made of plastics with aluminium foil.**
- **Put a conductive mat on the work table.**
- **Ground the soldering iron.**
- **Do not touch the pins of IC, LSI or VLSI with fingers directly.**

# 19. Schematic Diagram

### 19.1. CD Servo Circuit

### 19.2. Main Circuit

### 19.3. Main Control Circuit, Panel Circuit, Power-In Circuit and Function Circuit

### 19.4. Deck Circuit, Deck Mechanism Circuit and Tape Eject Circuit

### 19.5. Power Circuit

### 19.6. Transformer Circuit

### 19.7. CD Loading Circuit

## 20. Printed Circuit Board

### 20.1. CD Servo P.C.B.

### 20.2. Main P.C.B.

### 20.3. Main Control P.C.B. and Panel P.C.B.

### 20.4. Power In P.C.B., Function P.C.B. and Deck Mechanism P.C.B.

### 20.5. Deck P.C.B. and Tape Eject P.C.B.

### 20.6. CD Loading P.C.B.

### 20.7. Power P.C.B.

### 20.8. Transformer P.C.B.

## 21. Wiring Connection Diagram

## 22. Illustration of IC’s, Transistors and Diodes

## 23. Terminal Function of IC's

### 23.1. IC702 (MN6627953HB) Servo processor/ Digital signal processor/ Digital filter/ D/A converter

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 1 | EXT0 | I/O | Extend input/output port 0 |
| 2 | EXT1 | I/O | Extend input/output port 1 |
| 3 | EXT2 | I/O | Extend input/output port 2 |
| 4 | PWMSEL | I | PWM output selection input (L: Direct; H: Tri-State |
| 5 | SPOUT | O | Spindle driver output signal |
| 6 | SPPOL | O | Spindle driver output signal |
| 7 | TRVP | O | Spindle driver output signal |
| 8 | TRVM | O | Spindle driver output signal |
| 9 | TRVP2 | O | Traverse driver output signal 2 (+) |
| 10 | TRVM2 | O | Traverse driver output signal 2 (-) |
| 11 | TRP | O | Traverse driver output signal (+) |
| 12 | TRM | O | Traverse driver output signal (-) |
| 13 | FOP | O | Traverse driver output signal (+) |
| 14 | FOM | O | Traverse driver output signal (-) |
| 15 | IOVDD3 | - | I/O power supply 3 |
| 16 | DVDD1 | - | Power supply 1 for digital circuit |
| 17 | DVSS1 | - | Digital circuit GND 1 |
| 18 | ADPVCC | I | Power voltage monitor. Power voltage input |
| 19 | TEIN | I | DSP traverse error signal input |
| 20 | FEIN | I | DSP focus error signal input |
| 21 | CEA | I/O | HPF-Amp capacitance connection terminal |
| 22 | RFENV | O | RF envelope signal monitor |

| | | | monitor |
|---|---|---|---|

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 23 | FEOUT | O | FE Amp output |
| 24 | FEN | I | FE Amp reversal input |
| 25 | TEN | I | TE Amp reversal input |
| 26 | TEOUT | O | TE Amp output |
| 27 | VREF | - | VREF voltage |
| 28 | PD | I | APC Amp input |
| 29 | LD | O | APC Amp output |
| 30 | E | I | Tracking input signal 1 |
| 31 | F | I | Tracking input signal 2 |
| 32 | D | I | Tracking input signal 4 |
| 33 | B | I | Tracking input signal 2 |
| 34 | C | I | Tracking input signal 3 |
| 35 | A | I | Focus input signal 1 |
| 36 | DCDET | - | Detection HPF capacitance terminal |
| 37 | RFVDD | - | RF Amp power supply |
| 38 | RESERVE | - | GND |
| 39 | RFOUT | O | RF Amp output |
| 40 | RFIN | I | AGC input |
| 41 | CAGC | I/O | AGC control terminal |
| 42 | ARFOUT | O | AGC output (Audio RF) |
| 43 | AVSS2 | - | Analog circuit GND 2 |
| 44 | ARFIN | I | RF signal input |
| 45 | DSLF | O | DSL loop filter |
| 46 | IREF | I | I (current), Reference input |
| 47 | PLLF | O | PLL loop filter |
| 48 | PLLF0 | O | PLL loop filter |
| 49 | AVDD2 | - | Analog circuit power supply 2 |
| 50 | OUTL | O | LCH output signal |
| 51 | AVSS1 | - | Audio output circuit GND 1 |
| 52 | N.C. | - | No Connection |
| 53 | AVDD1 | - | Power supply 1 for analog circuit |

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 54 | OUTR | O | RCH output signal |
| 55 | DVSS2 | - | Digital circuit GND 2 |
| 56 | IOVDD1 | - | I/O power supply 1 |
| 57 | DVDD2 | - | Power supply 2 for Digital circuit |
| 58 | REGON | I | Laser diode control (H : ON) |
| 59 | IOMODE | I | I/O switching setting input |
| 60 | NTEST | I | Test mode setting input (H: ON) |
| 61 | TX | O | Digital audio interface output |
| 62 | FLAG | O | Flag signal output |
| 63 | MCLK | I | Micro-P serial command CLK |
| 64 | MDATA | I | Micro-P serial command DATA |
| 65 | MLD | I | Micro-P serial command LOAD |
| 66 | STAT | O | Status signal output |
| 67 | BLKCK | O | Subcode block clock |
| 68 | NRST | I | LSI reset input (L: RESET) |
| 69 | DVSS3 | - | Digital circuit GND 3 |
| 70 | X2 | O | Crystal oscillator circuit output |
| 71 | X1 | I | Crystal oscillator circuit input |
| 72 | IOVDD2 | I | I/O power supply 2 |
| 73 | DQSY | O | Pack signal output for CD-Text data |
| 74 | TXTD | O | CD Text signal output |
| 75 | TXTCK | I | External clock signal input for CD-Text register |
| 76 | GIO0 | I/O | General purpose input /output Terminal 0 |
| 77 | GIO1 | I/O | General purpose input /output Terminal 1 |
| 78 | GIO2 | I/O | General purpose input /output Terminal 2 |
| 79 | GOUT0 | O | General purpose output Terminal 0 |

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 80 | GOUT1 | O | General purpose output Terminal 1 |

## 23.2. IC703 (BA5948FPE2) IC 4CH DRIVE

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 1 | IN2 | I | Motor Driver Input |
| 2 | PC2 | I | Turntable Motor Drive Signal (“L”: ON) |
| 3 | IN1 | I | Motor Driver (1) Input |
| 4 | PC1 | - | Traverse Motor Drive Signal (“L”:ON) |
| 5 | N.C. | - | No Connection |
| 6 | N.C. | - | No Connection |
| 7 | N.C. | - | No Connection |
| 8 | N.C. | - | No Connection |
| 9 | PGND1 | - | Ground Connection (1) for Driver |
| 10 | PVCC1 | I | Power Supply (1) for Driver |
| 11 | D1- | O | Motor Driver (1) reverse - action output |
| 12 | D1+ | O | Motor Driver (1) forward - action output |
| 13 | D2- | O | Motor Driver (2) reverse - action output |
| 14 | D2+ | O | Motor Driver (2) forward - action output |
| 15 | D3- | O | Motor Driver (3) reverse - action output |
| 16 | D3- | O | Motor Driver (3) forward - action output |
| 17 | D4- | O | Motor Driver (4) reverse - action output |
| 18 | D4+ | O | Motor Driver (4) forward - action output |
| 19 | PVCC2 | - | Power Supply (2) for Driver |
| 20 | PGND2 | - | Ground Connection (2) for Driver |
| 21 | N.C. | - | No Connection |

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 22 | N.C. | - | No Connection |
| 23 | N.C. | - | No Connection |
| 24 | N.C. | - | No Connection |
| 25 | VCC | - | Power Supply Terminal |
| 26 | VREF | - | Reference Voltage Input |
| 27 | IN4 | I | Motor Driver (4) Input |
| 28 | IN3 | I | Motor Driver (3) Input |

## 23.3. IC302 (C2CBJG000574) MICRO PROCESSOR

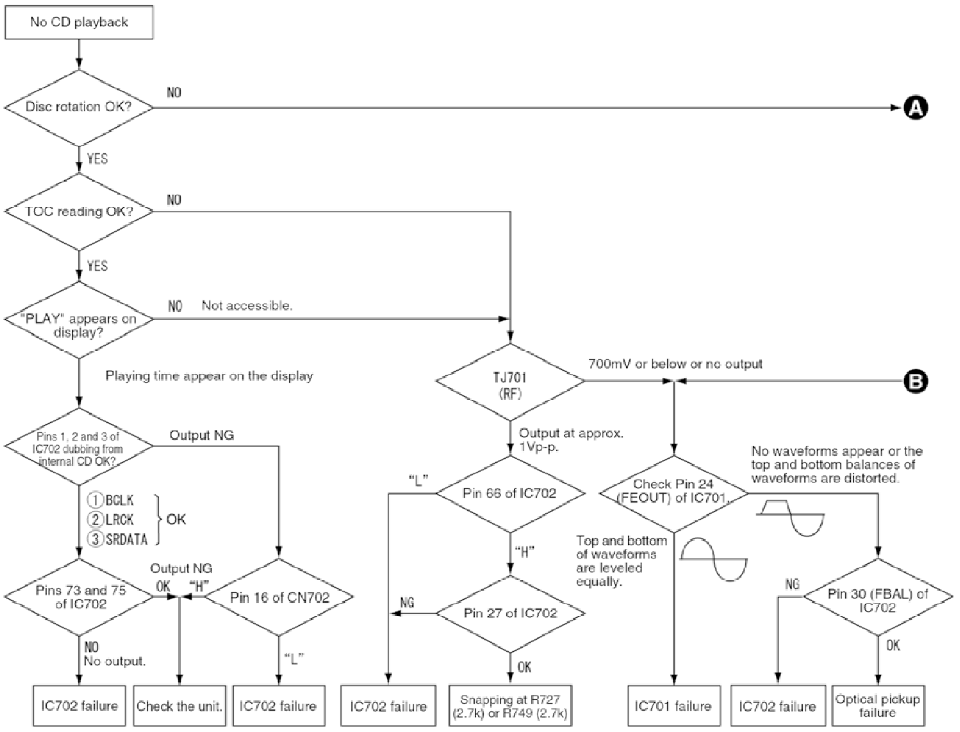
| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 1 | CH_SW | I | Change Switch (CR16) |
| 2 | TU_TUNED | I | Tuner tuned signal |
| 3 | TU_ST | I | Tuner Stereo signal |
| 4 | TU_CK | I | Tuner Serial Clock Input |
| 5 | TU_SDA | I/O | Tuner Serial Data Input |
| 6 | MBP1 | O | Microcomputer Beat Proof Output 1 (CONTROL) |
| 7 | MBP2 | O | Microcomputer Beat Proof Output 2 (CONTROL) |
| 8 | BYTE | - | External Data Bus Width Select Input (Connect To Ground) |
| 9 | CNVSS/ | - | Flash Mode Terminal (Connected To Ground) |
| 10 | XCIN | - | 32.768 kHz Sub Clock |
| 11 | XCOUT | - | 32.768 kHz Sub Clock |
| 12 | /RESET | - | Reset Input (ACTIVE L) |
| 13 | XOUT | - | 10 MHz Main Clock |
| 14 | VSS | - | Ground (0V) |
| 15 | XIN | - | 10 MHz Main Clock |
| 16 | VCC | - | Power Supply (+5V) |
| 17 | /NMI | - | Connect to Vcc (+5V) |
| 18 | RMT | I | Remote Control Input |
| 19 | BLKCK | I | CD Block Clock Input (Inverted) |
| 20 | SYNC | I | AC Failure Detect Input |
| 21 | MUTE_H | O | HIC Mute |
| 22 | EE_CS/ | O | EEPROM Chip Select |
| 23 | EE_CLK | O | EEPROM CLOCK |

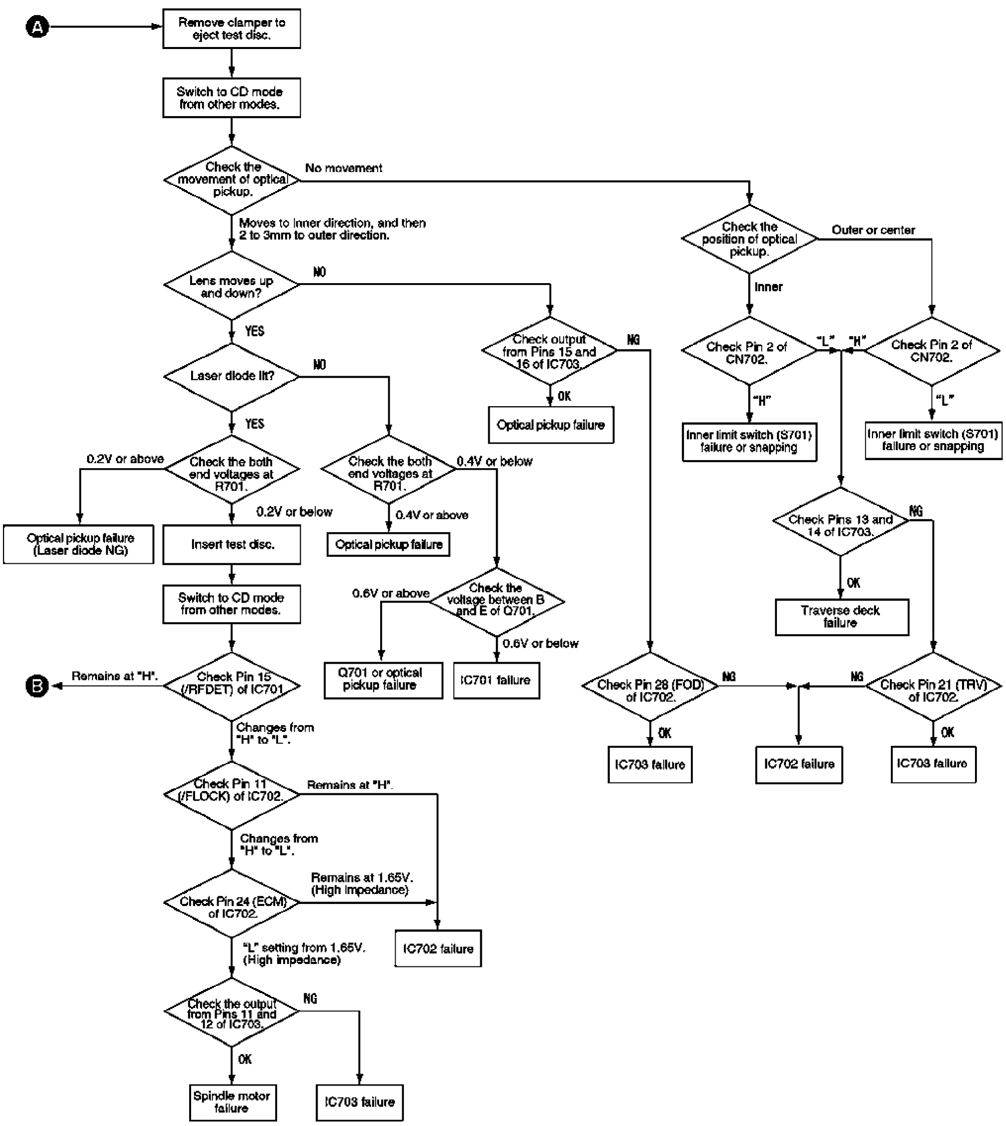
| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 24 | TMUTE | O | H=Tuner muting |
| 25 | AUX_MUTE | O | A=AUX muting |
| 26 | FL_CS1 | O | FL Driver Chip Select (Master) |
| 27 | NC | - | No Connection |
| 28 | FL_CLK | O | Serial Clock to FL Driver |
| 29 | /FL_RESET | O | Reset Input (ACTIVE: L) |
| 30 | FL_DOUT | O | Serial Data To FL Driver (Output) |
| 31 | RXD | - | No Connection |
| 32 | TXD | - | No Connection |
| 33 | SCLK | - | No Connection |
| 34 | BUSY | - | No Connection |
| 35 | NC | - | No Connection |
| 36 | NC | - | No Connection |
| 37 | NC | - | No Connection |
| 38 | NC | - | No Connection |
| 39 | MCLK | O | CD Command CLK Output |
| 40 | MUTE_A | O | Audio Mute |
| 41 | EPM | - | - |
| 42 | MDATA | O | CD Command Data Output |
| 43 | MLD | O | CD Command Load Output/ |
| 44 | RDS_CLK | I | RDS Clock Input |
| 45 | RDS_DAT | I | RDS Data Input |
| 46 | CE | - | - |
| 47 | DCDET | I | DC Detect Input |
| 48 | STATUS | I | CD Servo LSI Status Input (Inverted) |
| 49 | PCONT | O | Main Transformer Control Output |
| 50 | PLAY_SW | I | Play Switch (CR16) |
| 51 | ST_SW | I | Stock Switch (CR16) |
| 52 | OP_SW | I | Open Switch (CR16) |
| 53 | POS | I | Position Switch (CR16) |
| 54 | BT_SW | I | Bottom Switch (CR16) |
| 55 | M1_R | O | Changer Motor 1 Reverse Control |
| 56 | M1_F | O | Changer Motor 1 Forward Control |

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 57 | M2_R | O | Changer Motor 2 Reverse Control |
| 58 | M2_F | O | Changer Motor 2 Forward Control |
| 59 | REC | O | when record circuit is operating DURING RECORDING=H |
| 60 | KEY_LED | O | Dimmer ON=L, Dimmer Off=H- |
| 61 | PHOTO | I | PHOTO (SG Mechanism only) |
| 62 | VCC | - | Power Supply (+5V) |
| 63 | EE_DAT | I/O | EEPROM DATA |
| 64 | VSS | - | Ground (0V) |
| 65 | DMT | O | Deck Mute at mecha transition L=mute OFF, H=mute ON |
| 66 | NC | - | - |
| 67 | ASP_CLK | O | ASP CLK |
| 68 | ASP_DAT | O | ASP DATA |
| 69 | N.C. | - | No Connection |
| 70 | N.C. | - | No Connection |
| 71 | N.C. | - | No Connection |
| 72 | N.C. | - | No Connection |
| 73 | N.C. | - | No Connection |
| 74 | N.C. | - | No Connection |
| 75 | N.C. | - | No Connection |
| 76 | N.C. | - | No Connection |
| 77 | N.C. | - | No Connection |
| 78 | N.C. | - | No Connection |
| 79 | /CD | O | CD POWER CONTROL (Active Low) |
| 80 | CD_RST | O | CD Reset Output |
| 81 | N.C. | - | No Connection |
| 82 | /RESTSW | I | CD Limit Switch Input for the Most Inner Point (Active Low) |
| 83 | N.C. | - | No Connection |
| 84 | HP_SW | I | Headphone Detect SW Input |
| 85 | SSEQ_LED | O | Super Sound EQ LED Control |
| 86 | RE_LED | O | MP3/WMA Re-master Control |

| Pin No. | Mark | I/O | Function |
|---|---|---|---|
| 87 | MOTOR | O | MOTOR Control Output L=OFF, H=ON |
| 88 | PLUNGER | O | Deck PLUNGER Control Output L=OFF, H=ON |
| 89 | DECK_AD1 | I | DECK AD Input 1 |
| 90 | DECK_AD2 | I | DECK AD Input 2 |
| 91 | REG1 | I | Region Setting 1 |
| 92 | KEY3 | I | KEY3 INPUT |
| 93 | KEY2 | I | KEY2 INPUT |
| 94 | KEY1 | I | KEY1 INPUT |
| 95 | VOL_JOG1 | I | Volume Jog 1 |
| 96 | AVSS | - | Analog Power Supply Input (Connect to GND) |
| 97 | N.C. | - | No Connection |
| 98 | VREF | - | Reference for A-D (5V) |
| 99 | AVCC | - | Analog Power Supply Input |
| 100 | N.C. / Demo selector | I | (H=default demo on, L= default demo off) |

# 24. Troubleshooting Flowchart (CD Section Circuit)


No CD playback
Disc rotation OK?
NO
A
YES
TOC reading OK?
NO
YES
"PLAY" appears on display?
NO
Not accessible.
Playing time appear on the display
Pins 1, 2 and 3 of IC702 dubbing from internal CD OK?
Output NG
① BCLK
② LRCK
③ SRDATA
OK
Pins 73 and 75 of IC702
Output NG
OK
"H"
Pin 16 of CN702
NO
No output.
"L"
IC702 failure
Check the unit.
IC702 failure
TJ701 (RF)
700mV or below or no output
B
Output at approx. 1Vp-p.
"L"
Pin 66 of IC702
"H"
NG
Pin 27 of IC702
OK
IC702 failure
Snapping at R727 (2.7k) or R749 (2.7k)
Check Pin 24 (FEOUT) of IC701.
No waveforms appear or the top and bottom balances of waveforms are distorted.
Top and bottom of waveforms are leveled equally.
NG
Pin 30 (FBAL) of IC702
OK
IC701 failure
IC702 failure
Optical pickup failure


A
Remove clamper to eject test disc.
Switch to CD mode from other modes.
Check the movement of optical pickup.
No movement
Moves to inner direction, and then 2 to 3mm to outer direction.
Lens moves up and down?
NO
YES
Laser diode lit?
NO
YES
Check the both end voltages at R701.
0.2V or above
0.2V or below
Optical pickup failure (Laser diode NG)
Insert test disc.
Switch to CD mode from other modes.
Check Pin 15 (/RFDET) of IC701
Remains at "H".
B
Changes from "H" to "L".
Check Pin 11 (/FLOCK) of IC702.
Remains at "H".
Changes from "H" to "L".
Check Pin 24 (ECM) of IC702.
Remains at 1.65V. (High impedance)
"L" setting from 1.65V. (High impedance)
IC702 failure
Check the output from Pins 11 and 12 of IC703.
NG
OK
Spindle motor failure
IC703 failure
Check the both end voltages at R701.
0.4V or below
0.4V or above
Optical pickup failure
Check the voltage between B and E of Q701.
0.6V or above
0.6V or below
Q701 or optical pickup failure
IC701 failure
Check output from Pins 15 and 16 of IC703.
NG
OK
Optical pickup failure
Check the position of optical pickup.
Outer or center
Inner
Check Pin 2 of CN702.
"L"
"H"
"H"
Inner limit switch (S701) failure or snapping
Check Pin 2 of CN702.
"L"
Inner limit switch (S701) failure or snapping
Check Pins 13 and 14 of IC703.
NG
OK
Traverse deck failure
Check Pin 28 (FOD) of IC702.
NG
OK
IC703 failure
IC702 failure
Check Pin 21 (TRV) of IC702.
NG
OK
IC703 failure

# 25. Parts Location and Replacement Parts List

**Notes:**

**- Important safety notice:**

**Components identified by ⚠ mark have special characteristics important for safety.**

**Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.**

**When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.**

**- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)**

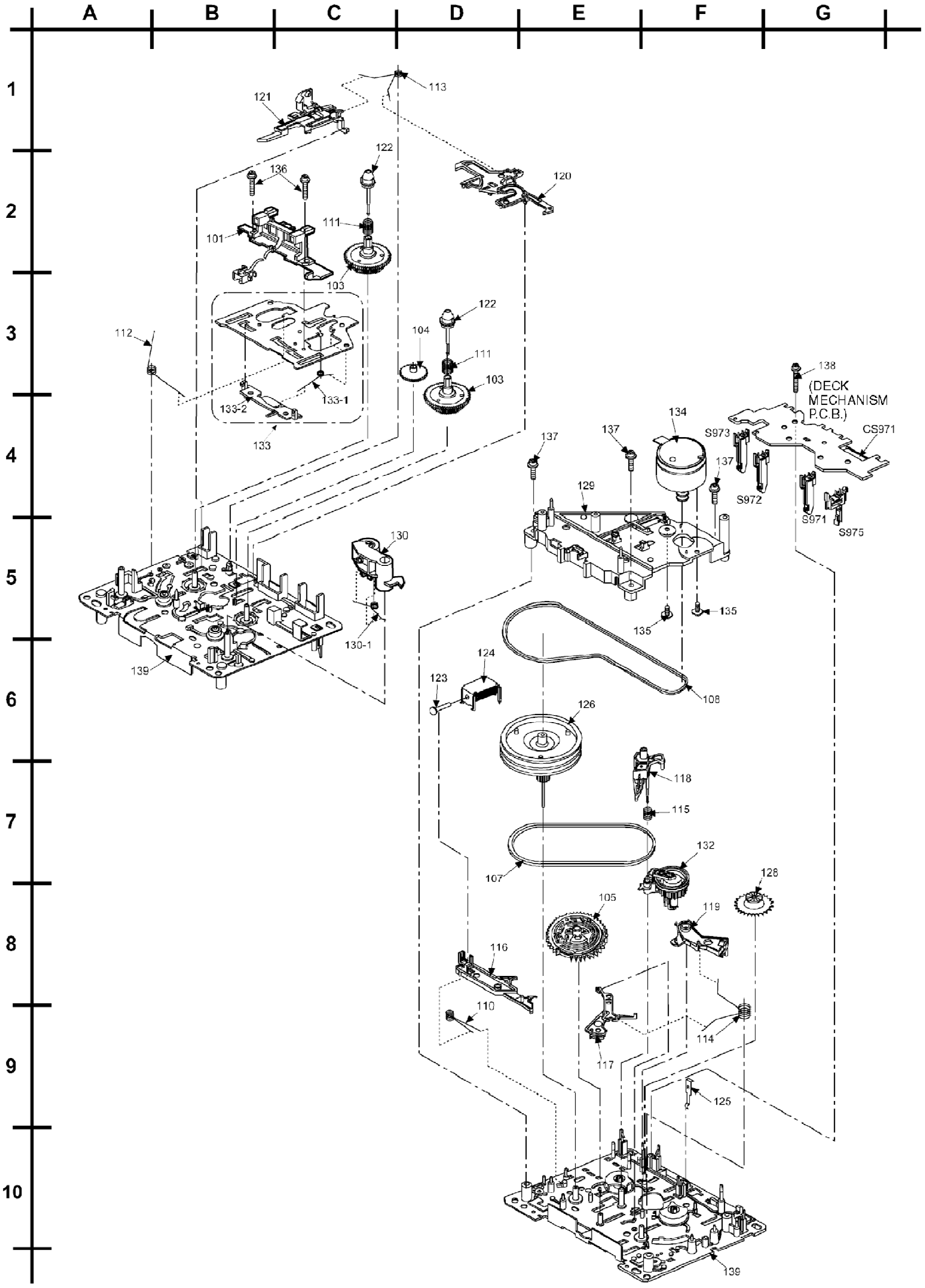
**Parts without these indications can be used for all areas.**

- **Warning: This product uses a laser diode. Refer to Precaution of Laser Diode.**
- **Capacitor values are in microfarads ( μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.**
- **Resistance values are in ohms, unless specified otherwise, 1K= 1,000 (OHM).**
- **The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.**
- **[M] Indicates in the Remarks columns indicates parts supplied by PAVCSG.**
- **Reference for O/I book languages are as follows:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ar: | Arabic | Du: | Dutch | It: | Italian | Sp: | Spanish |
| Cf: | Canadian French | En: | English | Ko: | Korean | Sw: | Swedis |
| Cz: | Czech | Fr: | French | Po: | Polish | Co: | Traditio Chinese |
| Da: | Danish | Ge: | German | Ru: | Russian | Cn: | Simplifi Chinese |
| Pe: | Persian | Ur: | Ukraine | | | | |

## 25.1. Deck Mechanism

### 25.1.1. Deck Mechanism Parts Location (RAA4402-S)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133-2
133-1
133
138
(DECK MECHANISM P.C.B.)
134
S973
CS971
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S972
S971
S975
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130-1
135
135
124
123
108
126
118
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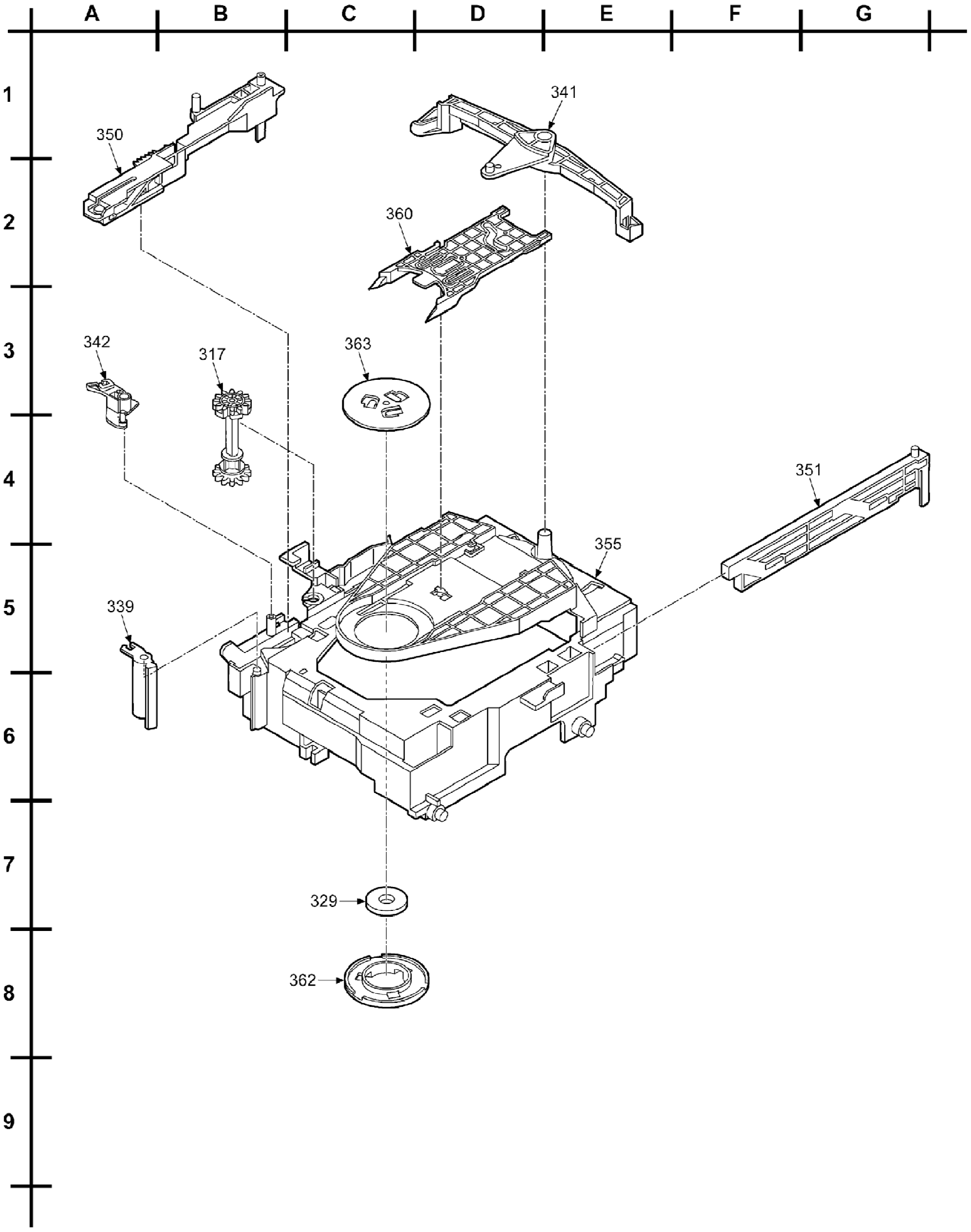
119
116
110
114
117
125
139

## 25.1.2. Deck Mechanism Parts List

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| | | CASSETTE DECK | |
| | | | |
| 101 | RED0067 | R/P HEAD BLOCK UNIT | [M] |
| 103 | RDG0300 | REEL BASE GEAR | [M] |
| 104 | RDG0301 | WINDING RELAY GEAR | [M] |
| 105 | RDK0026 | MAIN GEAR | [M] |
| 107 | RDV0033-4 | WINDING BELT | [M] |
| 108 | RDV0064 | CAPSTAN BELT | [M] |
| 110 | RMB0312 | TRIGGER LEVER SPRING | [M] |
| 111 | RMB0400 | REEL SPRING | [M] |
| 112 | RMB0403 | HEAB PANEL SPRING | [M] |
| 113 | RMB0404 | BRAKE ROD SPRING | [M] |
| 114 | RMB0406 | FR LEVER SPRING | [M] |
| 115 | RMB0408 | THRUST SPRING | [M] |
| 116 | RML0370 | TRIGGER LEVER | [M] |
| 117 | RML0371 | FR LEVER | [M] |
| 118 | RML0372 | WINDING LEVER | [M] |
| 119 | RML0374 | EJECT LEVER | [M] |
| 120 | RMM0131 | BRAKE ROD | [M] |
| 121 | RMM0133 | EJECT ROD | [M] |
| 122 | RMQ0519 | REEL HUB | [M] |
| 123 | RMS0398-1 | MOVING CORE | [M] |
| 124 | RXQ0470 | PLUNGER | [M] |
| 125 | RMC0061 | PACK SPRING | [M] |
| 126 | RXF0061 | FLYWHEEL F ASS’Y | [M] |
| 128 | RXG0040 | FF RELAY GEAR ASS’Y | [M] |
| 129 | RMK0283A-J | SUB-CHASSIS | [M] |
| 130 | RXL0124 | PINCH ROLLER F ASS’Y | [M] |
| 130-1 | RMB0401 | PINCH ARM SPRING F | [M] |
| 132 | RXL0126 | WINDING ARM ASS’Y | [M] |
| 133 | RXQ0412 | HEAD PANEL ASS’Y | [M] |
| 133-1 | RMB0405 | FR ROD SPRING | [M] |
| 133-2 | RMM0132 | FR ROD | [M] |
| 134 | REM0120 | CAP MOTOR ASS’Y | [M] |
| 135 | RHD26022 | MOTOR SCREW | [M] |
| 136 | XTW2+5L | HEAD BLOCK UNIT SCREW | [M] |
| 137 | XTW26+10S | SUB-CHASSIS SCREW | [M] |
| 138 | XYC2+JF17 | PCB EARTH SCREW | [M] |
| 139 | RFKJSTR280PP | CHASSIS ASS’Y | [M] |

## 25.2. CD Loading Mechanism

### 25.2.1. CD Loading Mechanism Parts Location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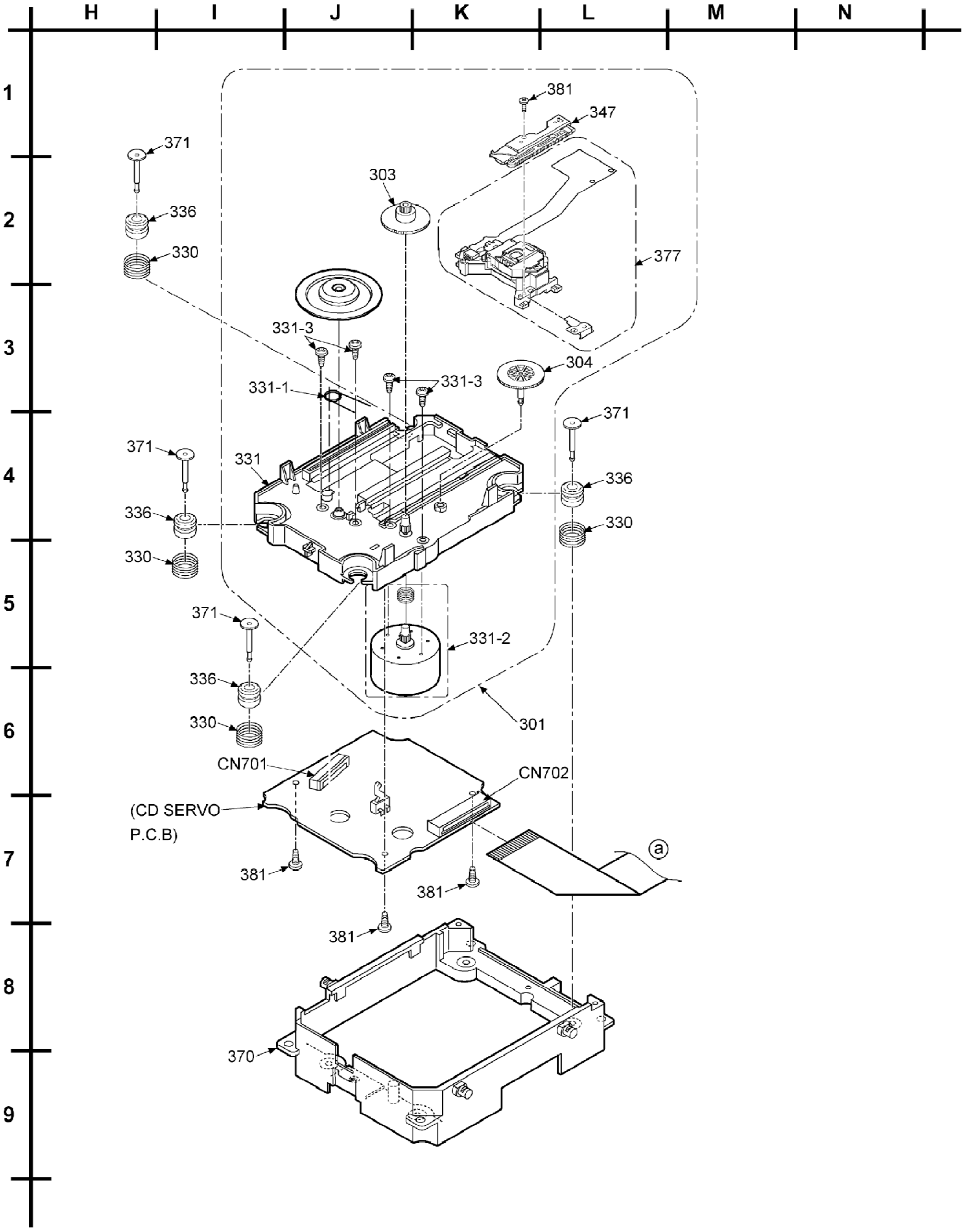
H
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331-3
331-1
331-3
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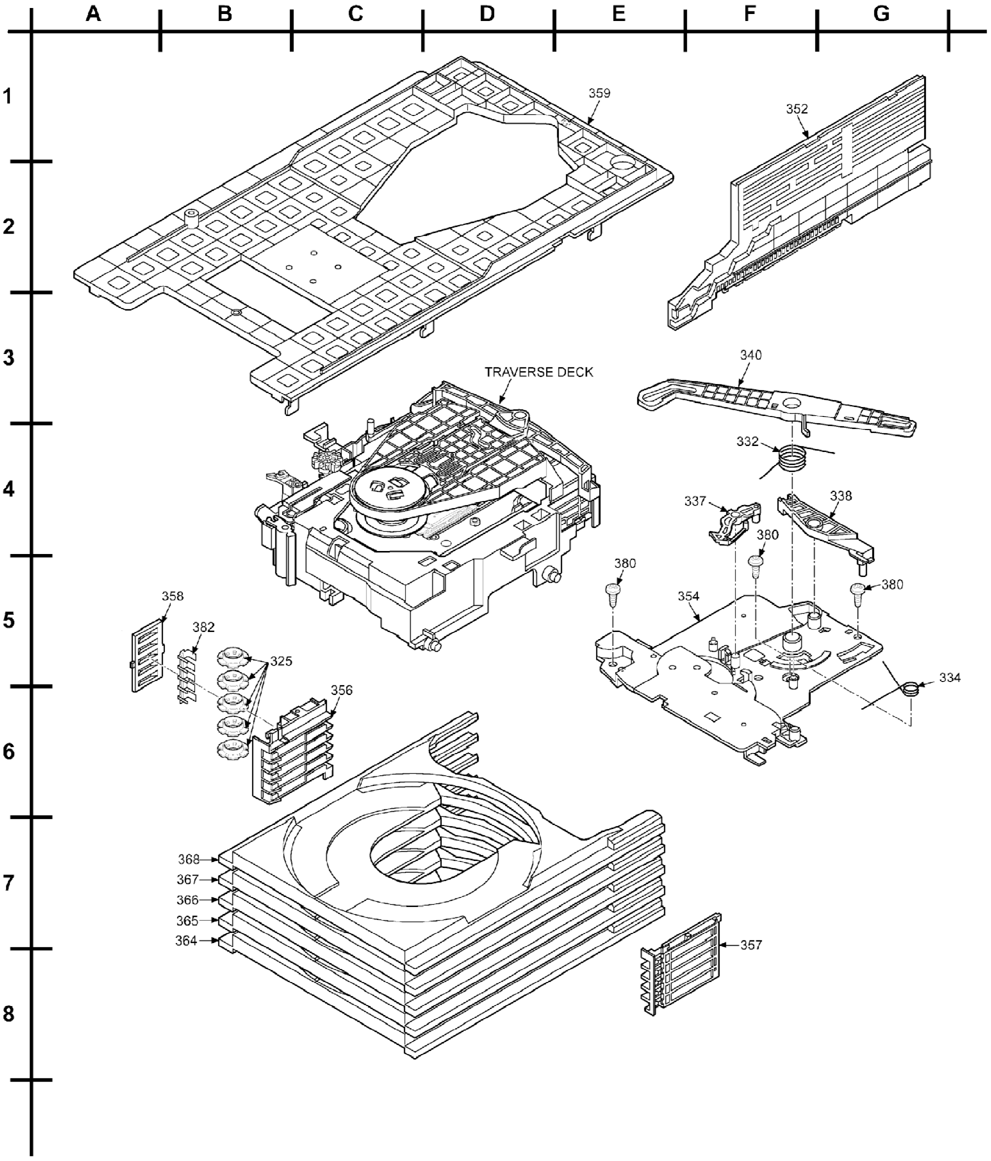
CN701
CN702
(CD SERVO
P.C.B)
ⓐ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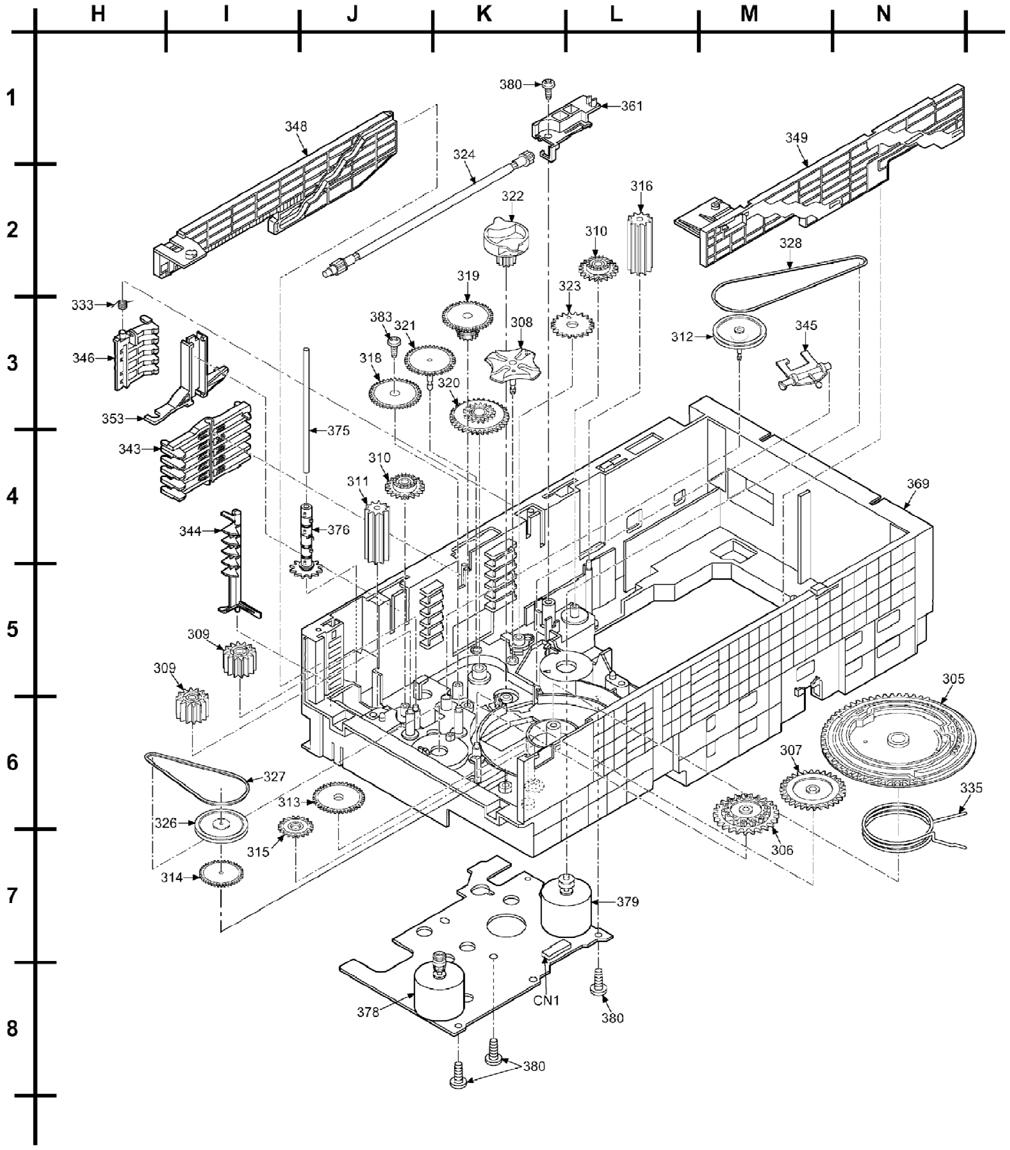
TRAVERSE DECK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380

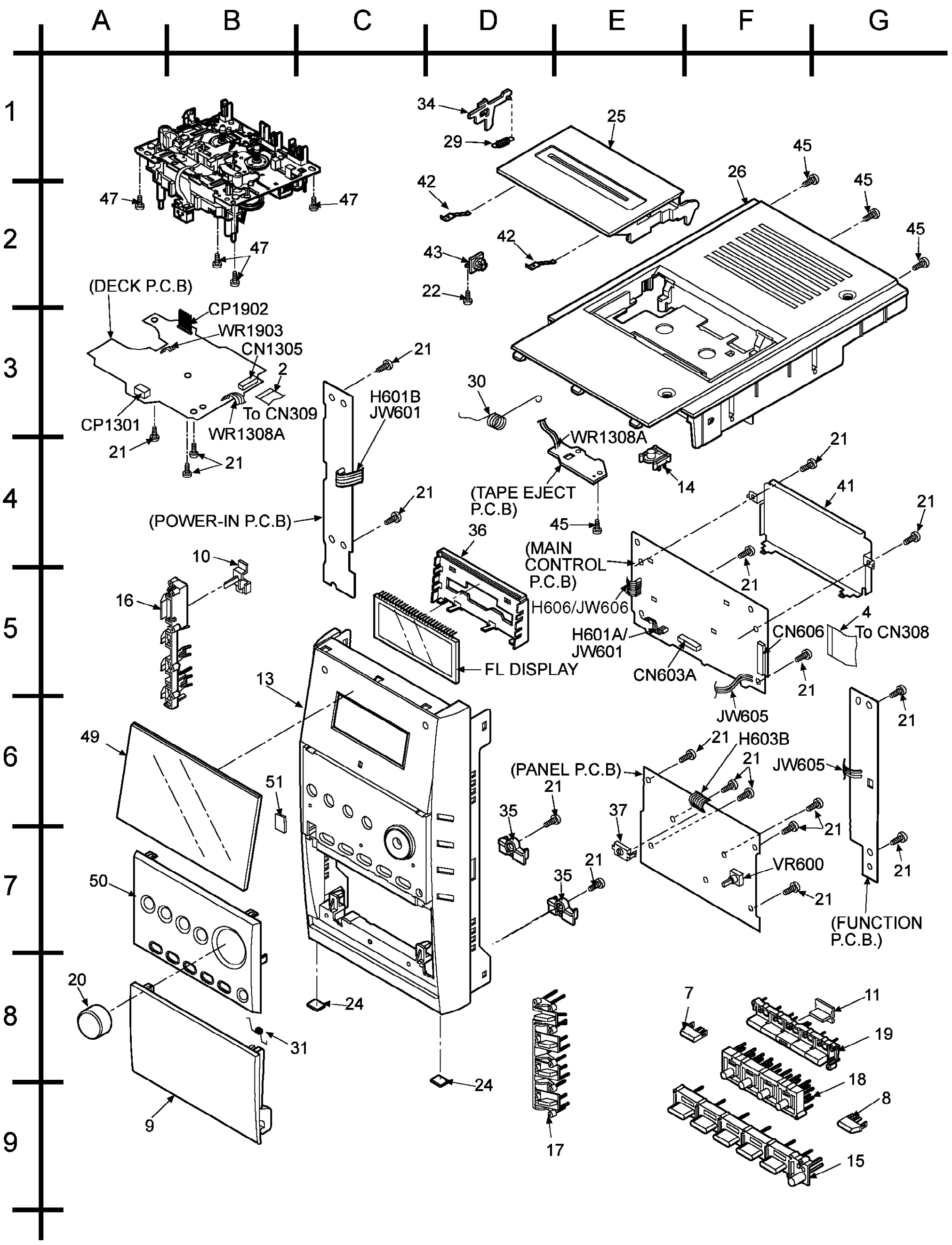
## 25.2.2. CD Loading Mechanism Parts List

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| | | TRAVERSE DECK | |
| | | | |
| 301 | RAE0157A-V | TRV UNIT W/O SERVO | [M] |
| 303 | RDG0455 | TRAVERSE GEAR (A) | [M] |
| 304 | RDG0456 | TRAVERSE GEAR (B) | [M] |
| 305 | RDG0519 | MAIN GEAR | [M] |
| 306 | RDG0520 | SPEED UP GEAR | [M] |
| 307 | RDG0521 | REVERSE GEAR | [M] |
| 308 | RDG0522 | GENEVA GEAR | [M] |
| 309 | RDG0523 | HOR RELAY GEAR | [M] |
| 310 | RDG0525 | CROWN GEAR | [M] |
| 311 | RDG0526 | TRAY RELAY GEAR | [M] |
| 312 | RDG0527 | UD PULLEY GEAR | [M] |
| 313 | RDG0528 | HOR SPEED DOWN GEAR | [M] |
| 314 | RDG0529 | HOR SPEED DOWN GEAR | [M] |
| 315 | RDG0530 | HOR DRIVE GEAR | [M] |
| 316 | RDG0531 | LOAD RELAY GEAR | [M] |
| 317 | RDG0532 | LOAD GEAR | [M] |
| 318 | RDG0535 | UD SPEED DOWN GEAR | [M] |
| 319 | RDG0534 | UD SPEED DOWN GEAR | [M] |
| 320 | RDG0536 | SELECT SPEED DOWN GEAR | [M] |
| 321 | RDG0537 | SELECT DRIVE GEAR | [M] |
| 322 | RDG0538 | CHANGE GEAR | [M] |
| 323 | RDG0539 | UD DRIVE GEAR | [M] |
| 324 | RDG0540 | TIMING GEAR | [M] |
| 325 | RDG0542 | TRAY GEAR | [M] |
| 326 | RDG0543 | HOR PULLEY GEAR | [M] |
| 327 | RDV0068 | HOR BELT | [M] |
| 328 | RDV0069 | UD BELT | [M] |
| 329 | RHM0001 | MAGNET | [M] |
| 330 | RME0109 | FLOATING SPRING | [M] |
| 331 | RFKNCT101 | TRAVERSE UNIT | [M] |
| 331-1 | RME0369 | PRESS SPRING | [M] |
| 331-2 | RXQ0632 | TRAVERSE MOTOR UNIT | [M] |
| 331-3 | XQN17+C28FJ | SCREW | [M] |
| 332 | RME0344 | UD ASSIST SPRING | [M] |
| 333 | RME0361 | TRAY STOPPER SPRING | [M] |
| 334 | RME0363 | LIMIT SPRING | [M] |
| 335 | RME0368 | MAIN GEAR SPRING | [M] |
| 336 | RMG0563-T | FLOATING RUBBER | [M] |
| 337 | RML0616 | SPEED UP LOCK | [M] |
| 338 | RML0617 | SEPARATE LEVER 1 | [M] |
| 339 | RML0618 | SEPARATE LEVER 2 | [M] |
| 340 | RML0619-1 | UD. CONNECTION LEVER | [M] |
| 341 | RML0620 | TRV.CONNECT LEVER | [M] |
| 342 | RML0621 | TRAY CHANGE LEVER | [M] |
| 343 | RML0622 | TRAY LOCK LEVER | [M] |
| 344 | RML0623 | OPEN SW. LEVER | [M] |
| 345 | RML0624 | CHG. LEVER | [M] |
| 346 | RML0637 | TRAY STOPPER | [M] |
| 347 | RMM0218 | TRAVERSE DRIVE RACK | [M] |
| 348 | RMM0239 | UD RACK L | [M] |
| 349 | RMM0240 | UD.RACK R | [M] |
| 350 | RMM0241 | TRV. SLIDE PLATE L | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| 351 | RMM0242 | TRV. SLIDE PLATE R | [M] |
| 352 | RMM0243 | SELECT RACK PART | [M] |
| 353 | RMM0244 | SELECT GUIDE | [M] |
| 354 | RMQ1051 | PITCH PLATE PART | [M] |
| 355 | RMQ1052 | UD BASE PART | [M] |
| 356 | RMQ1056 | TRAY GUIDE L | [M] |
| 357 | RMQ1057 | TRAY GUIDE R | [M] |
| 358 | RMQ1058 | GEAR HOLDER | [M] |
| 359 | RMQ1059 | TOP COVER | [M] |
| 360 | RMQ1060 | CLAMP GUIDE | [M] |
| 361 | RMQ1061 | TG.PLATE | [M] |
| 362 | RMR0334 | FIXTURE | [M] |
| 363 | RMR0624-W5 | CLAMPER | [M] |
| 364 | RMR1407A-H6 | TRAY 1 | [M] |
| 365 | RMR1407B-H6 | TRAY 2 | [M] |
| 366 | RMR1407C-H6 | TRAY 3 | [M] |
| 367 | RMR1407D-H6 | TRAY 4 | [M] |
| 368 | RMR1407E-H6 | TRAY 5 | [M] |
| 369 | RFKNAPM77MDS | MECHA BASE ASS'Y | [M] |
| 370 | RMR1427-X | MIDDLE CHASSIS | [M] |
| 371 | RMS0757-1 | FIXED PIN | [M] |
| 375 | RMS0762 | TRAY GEAR SHAFT | [M] |
| 376 | RXG0053 | TRAY DRIVE GEAR ASSY | [M] |
| 377 | RXQ0999 | OPU UNIT | [M] |
| 378 | RXQ0803 | LOADING MOTOR ASS'Y | [M] |
| 379 | RXQ0804 | UD MOTOR ASS'Y | [M] |
| 380 | XTB3+10JFJ | SCREW | [M] |
| 381 | XTN2+6GFJ | SCREW | [M] |
| 382 | RMC0472 | TRAY SPRING | [M] |
| 383 | RHD26045-L | SCREW | [M] |

## 25.3. Cabinet

### 25.3.1. Cabinet Parts Location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(DECK P.C.B)
CP1902
WR1903
CN1305
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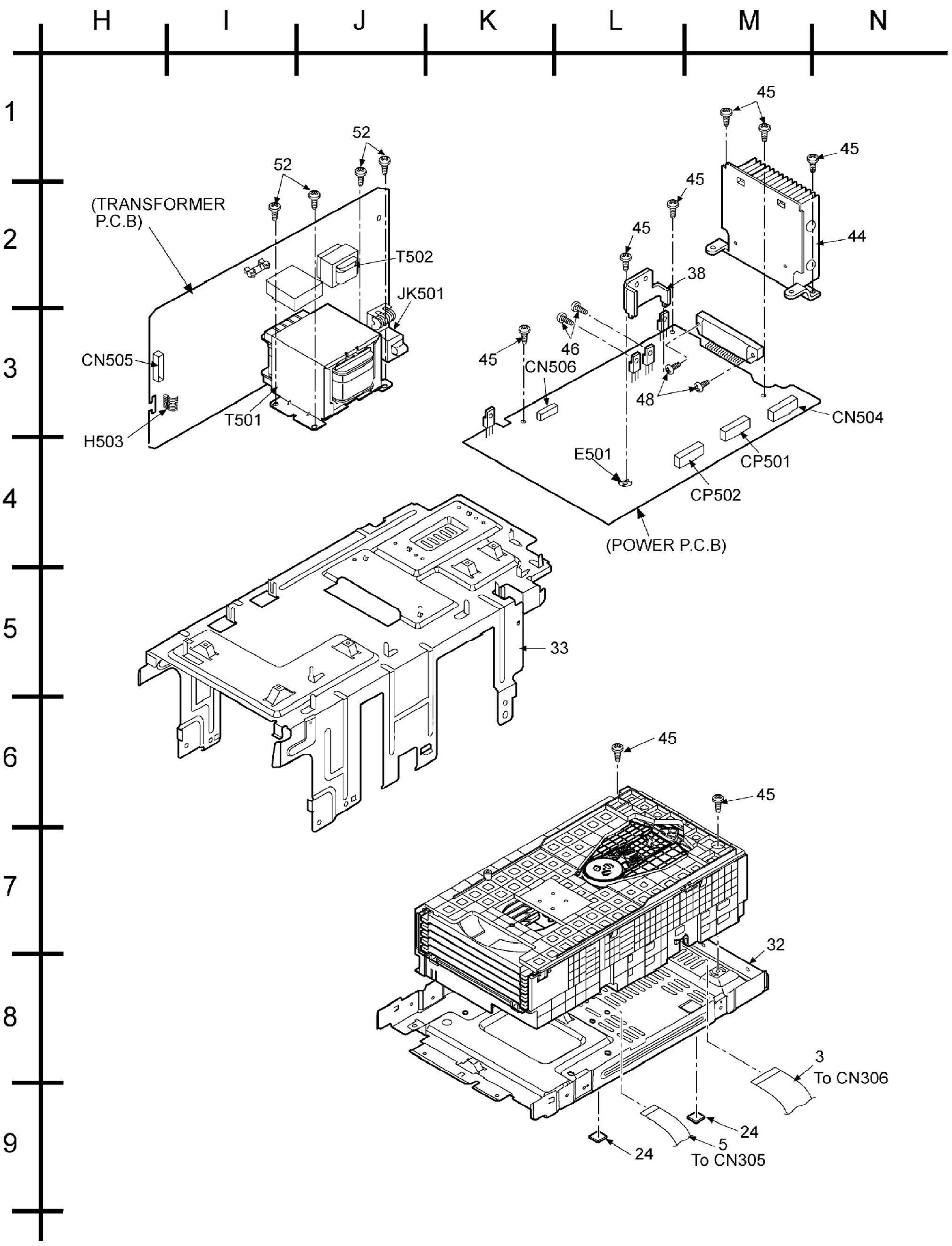
WR1308A
CP1301
H601B
JW601
WR1308A
(TAPE EJECT
P.C.B)
(POWER-IN P.C.B)
(MAIN
CONTROL
P.C.B)
H606/JW606
H601A/
JW601
CN606
To CN308
CN603A
FL DISPLAY
JW605
H603B
(PANEL P.C.B)
JW605
VR600
(FUNCTION
P.C.B.)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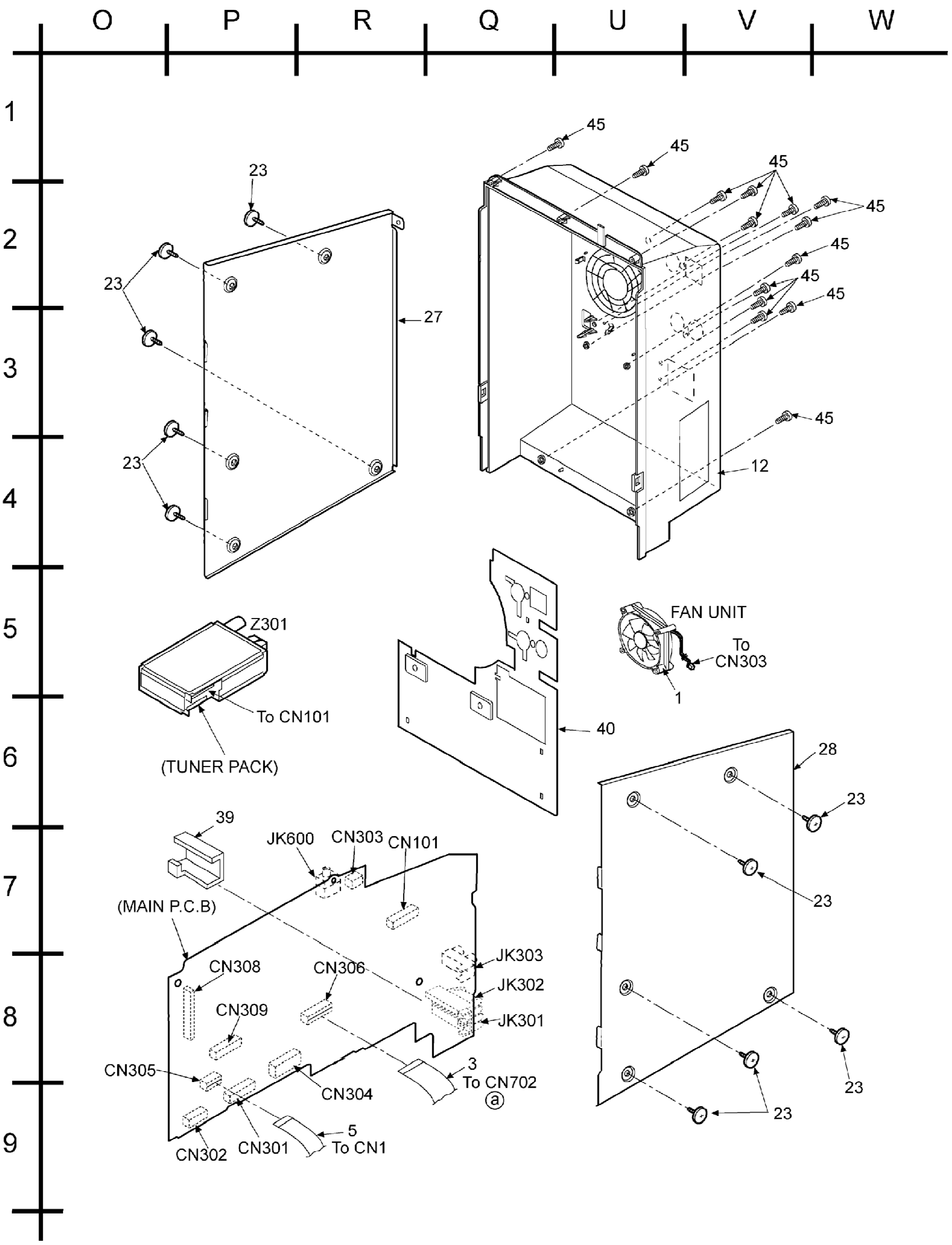
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FAN UNIT
To CN303
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JK600
CN303
CN101
(MAIN P.C.B)
CN308
CN306
JK303
JK302
JK301
CN309
CN305
CN304
3
To CN702
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CN302
CN301
5
To CN1

## 25.3.2. Cabinet Parts List

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| | | CABINET AND CHASSIS | |
| | | | |
| 1 | L6FALEFH0023 | DC FAN | [M] |
| 2 | REEV0026 | 21P FFC (DECK PCB) | [M] |
| 3 | REEV0039 | 17P FFC (CR16-MAIN) | [M] |
| 4 | REEV0070 | 17P FFC (PANEL-MAIN) | [M] |
| 5 | REEX0166 | 14P FFC WIRE (CR16) | [M] |
| 7 | RGKV0090-S | LEFT STRIP ORNAMENT | [M] |
| 8 | RGKV0091-S | RIGHT STRIP ORNAMENT | [M] |
| 9 | RFKLAPM31EBS | CD LID ASS'Y | [M] |
| 10 | RGLV0046 | AC IN LIGHTING TIP | [M] |
| 11 | RGLV0047 | SSEQ LIGHTING TIP | [M] |
| 12 | RKSV0024C-H | REAR CABINET | [M]EG E |
| 12 | RKSV0024D-H | REAR CABINET | [M]EB |
| 13 | RKMV0044A-S | FRONT PANEL | [M] |
| 14 | RGU2280-S | CASS EJECT BUTTON | [M] |
| 15 | RGUV0110-S | CD SELECTION BUTTON | [M] |
| 16 | RGUV0111-S | POWER BUTTON | [M] |
| 17 | RGUV0112-S | FUNCTION BUTTON | [M] |
| 18 | RGUV0114-S | MAIN CONTROL BUTTON | [M] |
| 19 | RGUV0115-S | MP3 BUTTON | [M] |
| 20 | RGWV0035-S | VOLUME KNOB | [M] |
| 21 | RHD26046-L | SCREW | [M] |
| 22 | RHD26049 | SCREW | [M] |
| 23 | RHD30007-1SJ | SCREW | [M] |
| 24 | RHGV0008 | LEG CUSHION | [M] |
| 25 | RKF0688-S | CASS HOLDER/LID | [M] |
| 26 | RKMV0045A-S | TOP CABINET | [M] |
| 27 | RKMV0046-S | SIDE PANEL LEFT | [M] |
| 28 | RKMV0047-S | SIDE PANEL RIGHT | [M] |
| 29 | RMB0448-J | LOCK ROD SPRING | [M] |
| 30 | RMB0780 | CASS OPEN SPRING | [M] |
| 31 | RMB0783 | CD LID OPEN SPRING | [M] |
| 32 | RMK0595 | BOTTOM CHASSIS | [M] |
| 33 | RMKV0037 | INNER CHASSIS | [M] |
| 34 | RMM0163-1 | CASSETTE LOCK ROD | [M] |
| 35 | RMN0780 | CD LID SUPPORT | [M] |
| 36 | RMNV0014 | FL HOLDER | [M] |
| 37 | RMNV0053 | SSEQ LED COVER | [M] |
| 38 | RMY0260 | HEAT SINK | [M] |
| 39 | RSC0669 | SP EARTH R | [M] |
| 40 | RSCV0052 | REAR SHIELD PLATE | [M] |
| 41 | RSCV0054 | FL REAR SHIELD | [M] |
| 42 | RUS757ZAA | CASS HALF SPRING | [M] |
| 43 | RXGX0003 | DAMPER GEAR UNIT | [M] |
| 44 | RXXV0037 | HEAT SINK UNIT | [M] |
| 45 | XTB3+10JFJK | SCREW | [M] |
| 46 | XTB3+8JFJK | SCREW | [M] |
| 47 | XTV3+10GFJ-M | SCREW | [M] |
| 48 | XTW3+15TFJ | SCREW | [M] |
| 49 | RGPV0066A-Q | FL WINDOW | [M] |
| 50 | RGKV0088-S | CENTER ORNAMENT | [M] |
| 51 | RKWV0045A | SENSOR WINDOW | [M] |
| 52 | XTWS3+6TFJ | SCREW | [M] |

## 25.4. Electrical Part List

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| | | PRINTED CIRCUIT BOARD | |
| | | | |
| | REPV0016B | DECK P.C.B. / TAPE EJECT P.C.B. | [M] / (RTL) |
| | REPV0037B | MAIN P.C.B./ MAIN CONTROL P.C.B. / POWER-IN P.C.B. / PANEL P.C.B. / FUNCTION P.C.B. | [M] (RTL) |
| | REPV0038B | POWER P.C.B. / TRANSFORMER P.C.B. | [M]E/EG / (RTL) |
| | REPV0038C | POWER P.C.B. / TRANSFORMER P.C.B. | [M]EB / (RTL) |
| | REPX0321H | DECK MECHANISM P.C.B. | [M] / (RTL) |
| | REP3569A | CD LOADING P.C.B. | [M] / (RTL) |
| | REPV0039A | CD SERVO P.C.B. | [M] / (RTL) |
| | | | |
| | | INTEGRATED CIRCUITS | |
| | | | |
| IC11 | C0GAG0000007 | UP/DOWN MOTOR DRIVE | [M] |
| IC21 | C0GAG0000007 | LOADING MOTOR DRIVE | [M] |
| IC300 | C1BB00000757 | IC ASP | [M] |
| IC302 | C2CBJG000574 | MICROPROCESSOR | [M] |
| IC303 | C3EBEG000073 | EEPROM | [M] |
| IC304 | C1BB00000715 | IC RDS | [M] |
| IC305 | C0DBZGC00067 | 3.3V REGULATOR | [M] |
| IC500 | RSN315H41-P | IC POWER AMP | [M] |
| IC501 | C0AABB000125 | IC OP AMP | [M] |
| IC600 | C0HBB0000044 | IC FL DRIVER | [M] |
| IC702 | MN6627953HB | SERVO PROCESSOR DIGITAL SIGNAL PROCESSOR / DIGITAL FILTER D/A CONVERTER | [M] |
| IC703 | BA5948FPE2 | IC 4CH DRIVE | [M] |
| IC971 | CNB13030R2AU | PHOTO INTERUPTOR | [M] |
| IC1000 | C1AA00000612 | ANALOG SWITCH | [M] |
| IC1001 | AN7326K | P/B REC AMP | [M] |
| | | | |
| | | TRANSISTORS | |
| | | | |
| Q1 | B3NAA0000068 | TRANSISTOR | [M] |
| Q200 | KRA102STA | TRANSISTOR | [M] |
| Q201 | B1ABCE000016 | TRANSISTOR | [M] |
| Q222 | B1ABCE000016 | TRANSISTOR | [M] |
| Q223 | B1ABCE000016 | TRANSISTOR | [M] |
| Q224 | B1ABCE000016 | TRANSISTOR | [M] |
| Q301 | KTA1504GRTA | TRANSISTOR | [M] |
| Q302 | KRC102STA | TRANSISTOR | [M] |
| Q303 | KTA1504GRTA | TRANSISTOR | [M] |
| Q304 | B1GBCFGG0001 | TRANSISTOR | [M] |
| Q305 | B1GBCFGG0001 | TRANSISTOR | [M] |
| Q306 | KRC103STA | TRANSISTOR | [M] |
| Q307 | B1ABCE000016 | TRANSISTOR | [M] |
| Q308 | B1ABCE000016 | TRANSISTOR | [M] |
| Q309 | KRC101STA | TRANSISTOR | [M] |
| Q310 | KRC101STA | TRANSISTOR | [M] |
| Q400 | KRA102STA | TRANSISTOR | [M] |
| Q422 | B1ABCE000016 | TRANSISTOR | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| Q423 | B1ABCE000016 | TRANSISTOR | [M] |
| Q424 | B1ABCE000016 | TRANSISTOR | [M] |
| Q501 | B1BACG000023 | TRANSISTOR | [M] |
| Q502 | B1BCCG000002 | TRANSISTOR | [M] |
| Q505 | B1ACCF000063 | TRANSISTOR | [M] |
| Q506 | B1BCCG000002 | TRANSISTOR | [M] |
| Q508 | KTC3199GRTA | TRANSISTOR | [M] |
| Q509 | KRA110MTA | TRANSISTOR | [M] |
| Q514 | 2SD0592ARA | TRANSISTOR | [M] |
| Q515 | KTC3199GRTA | TRANSISTOR | [M] |
| Q516 | KTC3199GRTA | TRANSISTOR | [M] |
| Q517 | KTC32030YTA | TRANSISTOR | [M] |
| Q519 | B1AAGC000006 | TRANSISTOR | [M] |
| Q520 | B1BACG000023 | TRANSISTOR | [M] |
| Q575 | B1AAGC000006 | TRANSISTOR | [M] |
| Q577 | 2SC3940ARA | TRANSISTOR | [M] |
| Q578 | KRC102MTA | TRANSISTOR | [M] |
| Q579 | 2SB0621AHA | TRANSISTOR | [M] |
| Q600 | KRC119STA | TRANSISTOR | [M] |
| Q700 | B1AACF000063 | TRANSISTOR | [M] |
| Q701 | B1ADCF000001 | TRANSISTOR | [M] |
| Q701 | KTA12710YTA | TRANSISTOR | [M] |
| Q702 | B1AACF000063 | TRANSISTOR | [M] |
| Q703 | B1AACF000063 | TRANSISTOR | [M] |
| Q704 | KRA102MTA | TRANSISTOR | [M] |
| Q710 | B1AAGC000006 | TRANSISTOR | [M] |
| Q711 | B1AAGC000006 | TRANSISTOR | [M] |
| Q714 | KTC3199GRTA | TRANSISTOR | [M] |
| Q715 | KTC3199GRTA | TRANSISTOR | [M] |
| Q716 | KTC3199GRTA | TRANSISTOR | [M] |
| Q717 | KTC3199GRTA | TRANSISTOR | [M] |
| Q718 | B1AAGC000006 | TRANSISTOR | [M] |
| Q719 | B1AAGC000006 | TRANSISTOR | [M] |
| Q720 | KTC3199GRTA | TRANSISTOR | [M] |
| Q721 | KTC3199GRTA | TRANSISTOR | [M] |
| Q725 | B1AAGC000006 | TRANSISTOR | [M] |
| Q726 | B1AAGC000006 | TRANSISTOR | [M] |
| Q1101 | B1ABGC000005 | TRANSISTOR | [M] |
| Q1201 | B1ABGC000005 | TRANSISTOR | [M] |
| Q1302 | B1GDCFJJ0002 | TRANSISTOR | [M] |
| Q1303 | B1GBCFGH0001 | TRANSISTOR | [M] |
| Q1304 | B1GDCFGH0002 | TRANSISTOR | [M] |
| Q1309 | B1AAGC000006 | TRANSISTOR | [M] |
| Q1310 | B1AAGC000006 | TRANSISTOR | [M] |
| Q1312 | B1ABCF000011 | TRANSISTOR | [M] |
| Q1314 | B1GDCFGH0002 | TRANSISTOR | [M] |
| Q1315 | KTA12710YTA | TRANSISTOR | [M] |
| Q1316 | 2SD09650RA | TRANSISTOR | [M] |
| Q1317 | B1ABGC000005 | TRANSISTOR | [M] |
| | | | |
| | | DIODES | |
| | | | |
| D201 | B0BC01000014 | DIODE | [M] |
| D302 | B0ACCE000003 | DIODE | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| D303 | B0ACCE000003 | DIODE | [M] |
| D304 | MA729TX | DIODE | [M] |
| D305 | B0ACCK000005 | DIODE | [M] |
| D500 | B0FBAM000009 | DIODE | [M] |
| D505 | B0AACK000004 | DIODE | [M] |
| D508 | MTZJ15BTA | DIODE | [M] |
| D515 | B0BA9R600002 | DIODE | [M] |
| D517 | B0BA5R600016 | DIODE | [M] |
| D520 | B0BA9R600002 | DIODE | [M] |
| D524 | B0BA01100004 | DIODE | [M] |
| D525 | B0AACK000004 | DIODE | [M] |
| D526 | B0AACK000004 | DIODE | [M] |
| D530 | B0AACK000004 | DIODE | [M] |
| D531 | B0BA8R200005 | DIODE | [M] |
| D578 | B0EAKM000117 | DIODE | [M] |
| D579 | B0EAKM000117 | DIODE | [M] |
| D580 | B0EAKM000117 | DIODE | [M] |
| D581 | B0EAKM000117 | DIODE | [M] |
| D582 | B0BA6R600008 | DIODE | [M] |
| D584 | B0EAKM000117 | DIODE | [M] |
| D585 | B0EAKM000117 | DIODE | [M] |
| D586 | B0EAKM000117 | DIODE | [M] |
| D587 | B0EAKM000117 | DIODE | [M] |
| D588 | B0EAKM000117 | DIODE | [M] |
| D589 | B0EAKM000117 | DIODE | [M] |
| D592 | B0EAKM000117 | DIODE | [M] |
| D593 | B0EAKM000117 | DIODE | [M] |
| D594 | B0BA03000015 | DIODE | [M] |
| D600 | B0BC6R700006 | DIODE | [M] |
| D601 | B3ADA0000087 | DIODE | [M] |
| D609 | B3AAA0000487 | DIODE | [M] |
| D700 | B0AACK000004 | DIODE | [M] |
| D701 | B0AACK000004 | DIODE | [M] |
| D702 | B0AACK000004 | DIODE | [M] |
| D703 | B0AACK000004 | DIODE | [M] |
| D704 | B0AACK000004 | DIODE | [M] |
| D705 | B0AACK000004 | DIODE | [M] |
| D706 | B0AACK000004 | DIODE | [M] |
| D707 | B0AACK000004 | DIODE | [M] |
| D708 | MA2C16500E | DIODE | [M] |
| D709 | MA2C16500E | DIODE | [M] |
| D750 | MAZ80560ML | DIODE | [M] |
| D971 | MA2C16500E | DIODE | [M] |
| D1301 | B0ACCK000005 | DIODE | [M] |
| | | | |
| | | VARIABLE RESISTOR | |
| | | | |
| VR600 | EVEJ1CF3024B | VOLUME ENCORDER | [M] |
| | | | |
| | | SWITCHES | |
| | | | |
| S1 | K0L1BA000065 | STOCK SWITCH | [M] |
| S2 | K0L1BA000065 | PLAY SWITCH | [M] |
| S3 | K0L1BA000078 | BOTTOM SWITCH | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| S4 | RSH1A045-1A | OPEN SWITCH | [M] |
| S5 | K0L1BA000065 | CHANGE SWITCH | [M] |
| S601 | EVQ21405RJ | CD 1 SWITCH | [M] |
| S602 | EVQ21405RJ | CD 2 SWITCH | [M] |
| S603 | EVQ21405RJ | CD 3 SWITCH | [M] |
| S604 | EVQ21405RJ | CD 4 SWITCH | [M] |
| S605 | EVQ21405RJ | CD 5 SWITCH | [M] |
| S606 | EVQ21405RJ | CD PLAY/PAUSE SWITCH | [M] |
| S607 | EVQ21405RJ | TAPE SWITCH | [M] |
| S608 | EVQ21405RJ | TUNER SWITCH | [M] |
| S609 | EVQ21405RJ | TRACK UP SWITCH | [M] |
| S610 | EVQ21405RJ | TRACK DOWN SWITCH | [M] |
| S611 | EVQ21405RJ | ALBUM UP SWITCH | [M] |
| S612 | EVQ21405RJ | ALBUM DOWN SWITCH | [M] |
| S613 | EVQ21405RJ | SSEQ SWITCH | [M] |
| S614 | EVQ21405RJ | POWER SWITCH | [M] |
| S615 | EVQ21405RJ | SURROUND SWITCH | [M] |
| S616 | EVQ21405RJ | AUX SWITCH | [M] |
| S617 | EVQ21405RJ | CD CHECK SWITCH | [M] |
| S618 | EVQ21405RJ | STOP SWITCH | [M] |
| S619 | EVQ21405RJ | OPEN/CLOSE SWITCH | [M] |
| S620 | EVQ21405RJ | CD CHANGE SWITCH | [M] |
| S621 | EVQ21405RJ | REV SWITCH | [M] |
| S622 | EVQ21405RJ | FWD SWITCH | [M] |
| S623 | EVQ21405RJ | REC SWITCH | [M] |
| S701 | RSH1A048-A | REST SWITCH | [M] |
| S971 | RSH1A018-3U | MODE SWITCH | [M] |
| S972 | RSH1A019-2U | HALF SWITCH | [M] |
| S973 | RSH1A019-2U | CR02 SWITCH | [M] |
| S975 | RSH1A019-2U | RECINH_F SWITCH | [M] |
| S1901 | EVQ21405RJ | TAPE EJECT SWITCH | [M] |
|  |  |  |  |
|  |  | CONNECTORS |  |
|  |  |  |  |
| CN1 | K1MN14B00066 | 14P FFC CONNECTOR | [M] |
| CN101 | K1KA10A00263 | 10P CONNECTOR | [M] |
| CN301 | K1KB13B00017 | 13P CONNECTOR | [M] |
| CN302 | K1KB07A00018 | 7P CONNECTOR | [M] |
| CN303 | K1KA02A00008 | 2P CONNECTOR (FAN) | [M] |
| CN304 | K1KA08B00255 | 8P CONNECTOR | [M] |
| CN305 | K1MN14C00004 | 14P FFC CONNECTOR | [M] |
| CN306 | K1MN17C00002 | 17P FFC CONNECTOR | [M] |
| CN308 | K1MN17A00040 | 17P FFC CONNECTOR | [M] |
| CN309 | K1MN21A00031 | 21P CONNECTOR | [M] |
| CN504 | K1KB08A00100 | 8P CONNECTOR | [M] |
| CN505 | K1KB07A00016 | 7P CONNECTOR | [M] |
| CN506 | RJT119W06V | 6P CONNECTOR | [M] |
| CN603A | K1KA09B00096 | 9P CONNECTOR | [M] |
| CN606 | K1MN17B00032 | 17P CONNECTOR | [M] |
| CN701 | RJS2A8616 | 16P FPC CONNECTOR | [M] |
| CN702 | RJS2A7717 | 17P FFC CONNECTOR | [M] |
| CN1305 | K1MN21B00010 | 21P FFC CONNECTOR | [M] |
|  |  |  |  |
| CP501 | K1KA13A00100 | 13P CONNECTOR | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| CP502 | K1KA07A00082 | 7P CONNECTOR | [M] |
| CP1301 | K1MN05A00019 | 5P CONNECTOR | [M] |
| CP1902 | K1KA09B00058 | 9P CONNECTOR | [M] |
| | | | |
| CS971 | RJU071H09M1 | 9P CONNECTOR | [M] |
| | | | |
| | | COILS & TRANSFORMERS | |
| | | | |
| L200 | G0AR76Y00002 | CHOKE COIL | [M] |
| L201 | G0AR76Y00002 | CHOKE COIL | [M] |
| L203 | J0JBC0000019 | CHIP INDUCTOR | [M] |
| L204 | G0C3R3JA0027 | COIL | [M] |
| L300 | G0C3R3JA0027 | COIL | [M] |
| L301 | G0A200D00002 | RF CHOKE COIL | [M] |
| L302 | G0C101JA0030 | COIL | [M] |
| L303 | G0C101JA0030 | COIL | [M] |
| L400 | G0AR76Y00002 | CHOKE COIL | [M] |
| L401 | G0AR76Y00002 | CHOKE COIL | [M] |
| L503 | G0B371HA0005 | LINE FILTER | [M] ⚠ |
| L600 | J0JBC0000019 | CHIP INDUCTOR | [M] |
| L601 | J0JBC0000019 | CHIP INDUCTOR | [M] |
| L602 | G0C100JA0030 | INDUCTOR | [M] |
| L603 | G0C101JA0027 | COIL | [M] |
| L604 | G0C3R3JA0027 | COIL | [M] |
| L1301 | 7L1A62N | BIAS OCS COIL | [M] |
| L1302 | RLQB470JTD-D | RF CHOKE COIL | [M] |
| | | | |
| T501 | G4C6AFK00009 | MAIN TRANSFORMER | [M] ⚠ |
| T502 | G4C2AAJ00007 | BACK-UP TRANSFORMER | [M] ⚠ |
| | | | |
| | | COMPONENT COMBINATIONS | |
| | | | |
| Z301 | ENG07808QF | TUNER PACK | [M] |
| Z501 | ERZV10V511CS | ZENER | [M] ⚠ |
| Z601 | B3RAB0000040 | REMOTE SENSOR | [M] |
| | | | |
| | | RELAY | |
| | | | |
| RL501 | K6B1ADA00011 | RELAY | [M] ⚠ |
| | | | |
| | | OSCILLATORS | |
| | | | |
| X300 | H0H433400001 | CRYSTAL OSCILLATOR | [M] |
| X301 | H2A100500006 | RESONATOR | [M] |
| X302 | RSXD32K7S02 | CRYSTAL OSCILLATOR | [M] |
| X701 | RSXC16M9S04 | CRYSTAL OSCILLATOR | [M] |
| | | | |
| | | DISPLAY TUBE | |
| | | | |
| FL600 | A2BB00000131 | FL DISPLAY | [M] |
| | | | |
| | | FUSE | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| | | | |
| F1 | K5D102BK0008 | FUSE | [M] ⚠ |
| | | | |
| | | FUSE HOLDERS | |
| | | | |
| FC1 | EYF52BCY | FUSE CLIP | [M] |
| FC2 | EYF52BCY | FUSE CLIP | [M] |
| | | | |
| | | FUSE PROTECTORS | |
| | | | |
| FP501 | K5G402A00025 | FUSE PROTECTOR | [M] ⚠ |
| FP502 | K5G102A00023 | FUSE PROTECTOR | [M] ⚠ |
| | | | |
| | | HOLDERS | |
| | | | |
| H503 | K1YF06000002 | 6P WIRE HOLDER | [M] |
| H601A | RMR0312 | 3P CABLE HOLDER | [M] |
| H601B | RMR0312 | 3P CABLE HOLDER | [M] |
| H603B | RMR0318 | 9P WIRE HOLDER | [M] |
| H606 | RMR0316 | 7P WIRE HOLDER | [M] |
| | | | |
| | | JACKS | |
| | | | |
| JK301 | K4BC04B00060 | JK RED/BLACK SPEAKER | [M] |
| JK302 | K4BC04B00059 | JK BLUE/HOAR SPEAKER | [M] |
| JK303 | K4BK02B00007 | JK AUX-IN | [M] |
| JK501 | K2AA2B000004 | JK AC INLET | [M] ⚠ |
| JK600 | K2HC103B0049 | JK HEADPHONE | [M] |
| | | | |
| | | EARTH TERMINAL | |
| | | | |
| E501 | SNE1004-2 | EARTH TERMINAL | [M] |
| | | | |
| | | CHIP JUMPERS | |
| | | | |
| WA100 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA101 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA102 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA103 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA104 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA105 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA106 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA107 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA108 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA110 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA111 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA112 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA113 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA114 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA115 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA116 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA117 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA118 | ERJ3GEY0R00V | CHIP JUMPER | [M] |

| | | | |
|---|---|---|---|
| WA113 | ERJ3GEY0R00V | CHIP JUMPER | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| WA119 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA120 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA121 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA122 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA123 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA214 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA414 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA615 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| WA616 | ERJ3GEY0R00V | CHIP JUMPER | [M] |
| | | | |
| WB201 | ERJ8GEY0R00V | CHIP JUMPER | [M] |
| WB202 | ERJ8GEY0R00V | CHIP JUMPER | [M] |
| WB203 | ERJ8GEY0R00V | CHIP JUMPER | [M] |
| | | | |
| | | WIRES | |
| | | | |
| WR1308A | RWJ0102110SS | 2P (MTR WIRE) | [M] |
| WR1903 | RWJ0102050KR | 2P (MOTOR WIRE) | [M] |
| | | | |
| JW503 | REXV0020 | 6P WIRE (PWR-TRAN) | [M] |
| JW601 | RWJ1103120XX | 3P CASS OPEN-DECK | [M] |
| JW603 | REXV0024 | 9P WIRE (PANEL-MAIN) | [M] |
| JW605 | RWJ1802110SS | 2P WIRE (PANEL-FUSE) | [M] |
| JW606 | RWJ0207180XQ | 7P WIRE (PANEL-TRAN) | [M] |
| | | | |
| | | RESISTORS | |
| | | | |
| R201 | D0GB181JA007 | 180 1/16W | [M] |
| R209 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R211 | D0GB182JA007 | 1.8K 1/16W | [M] |
| R214 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R218 | D0GB392JA041 | 3.9K 1/16W | [M] |
| R219 | D0GB391JA041 | 390 1/16W | [M] |
| R220 | D0GB272JA041 | 2.7K 1/16W | [M] |
| R221 | D0GB123JA007 | 12K 1/16W | [M] |
| R222 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R224 | D0GB392JA041 | 3.9K 1/16W | [M] |
| R228 | D0AF100JA039 | 10 1/4W | [M] |
| R229 | D0AF100JA039 | 10 1/4W | [M] |
| R230 | D0AF100JA039 | 10 1/4W | [M] |
| R231 | D0AF100JA039 | 10 1/4W | [M] |
| R271 | ERJ6GEYJ394V | 390K 1/10W | [M] |
| R272 | ERJ6GEYJ272V | 2.7K 1/10W | [M] |
| R273 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R274 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R275 | D0GB182JA007 | 1.8K 1/16W | [M] |
| R276 | D0GB392JA041 | 3.9K 1/16W | [M] |
| R301 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R302 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R303 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R304 | D0GB104JA007 | 100K 1/16W | [M] |
| R305 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R306 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R307 | D0GB101JA007 | 100 1/16W | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R308 | D0GB101JA007 | 100 1/16W | [M] |
| R309 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R310 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R312 | D0GB222JA041 | 2.2K 1/16W | [M] |
| R313 | D0GB101JA007 | 100 1/16W | [M] |
| R314 | D0GB101JA007 | 100 1/16W | [M] |
| R315 | D0GB101JA007 | 100 1/16W | [M] |
| R316 | D0GB101JA007 | 100 1/16W | [M] |
| R317 | D0GB101JA007 | 100 1/16W | [M] |
| R318 | D0GB101JA007 | 100 1/16W | [M] |
| R319 | D0GB101JA007 | 100 1/16W | [M] |
| R320 | D0GB101JA007 | 100 1/16W | [M] |
| R321 | D0GB101JA007 | 100 1/16W | [M] |
| R322 | D0GB101JA007 | 100 1/16W | [M] |
| R323 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R324 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R325 | D0GB473JA041 | 47K 1/16W | [M] |
| R326 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R327 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R328 | D0GB101JA007 | 100 1/16W | [M] |
| R329 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R330 | D0GB474JA041 | 470K 1/16W | [M] |
| R331 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R332 | D0GB474JA041 | 470K 1/16W | [M] |
| R333 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R334 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R335 | D0GB101JA007 | 100 1/16W | [M] |
| R336 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R337 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R338 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R339 | D0GB101JA007 | 100 1/16W | [M] |
| R340 | D0GB101JA007 | 100 1/16W | [M] |
| R341 | D0GB101JA007 | 100 1/16W | [M] |
| R342 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R343 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R344 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R345 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R346 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R347 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R348 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R349 | ERJ3GEYJ681V | 680 1/16W | [M] |
| R350 | D0GB473JA041 | 47K 1/16W | [M] |
| R351 | D0GB473JA041 | 47K 1/16W | [M] |
| R352 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R353 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R354 | ERJ3GEYJ681V | 680 1/16W | [M] |
| R355 | D0GB334JA041 | 330K 1/16W | [M] |
| R356 | ERJ3GEYJ106V | 10M 1/16W | [M] |
| R357 | D0GB223JA041 | 22K 1/16W | [M] |
| R358 | D0GB223JA041 | 22K 1/16W | [M] |
| R359 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R360 | D0GB153JA007 | 15K 1/16W | [M] |
| R361 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R362 | D0GB471JA041 | 470 1/16W | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R363 | ERJ3GEYJ121V | 120 1/16W | [M] |
| R364 | D0GB101JA007 | 100 1/16W | [M] |
| R365 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R366 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R367 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R368 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R369 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R370 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R371 | D0GB101JA007 | 100 1/16W | [M] |
| R372 | D0GB223JA041 | 22K 1/16W | [M] |
| R373 | ERJ3GEYJ122V | 1.2K 1/16W | [M] |
| R374 | ERJ3GEYJ122V | 1.2K 1/16W | [M] |
| R375 | ERD2FCVJ4R7T | 4.7 1/4W | [M] |
| R377 | D0GB223JA041 | 22K 1/16W | [M] |
| R378 | D0GB101JA007 | 100 1/16W | [M] |
| R379 | D0GB101JA007 | 100 1/16W | [M] |
| R381 | D0GB101JA007 | 100 1/16W | [M] |
| R382 | D0GB101JA007 | 100 1/16W | [M] |
| R383 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R384 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R385 | D0GB101JA007 | 100 1/16W | [M] |
| R386 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R388 | D0GB473JA041 | 47K 1/16W | [M] |
| R389 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R390 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R391 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R411 | D0GB182JA007 | 1.8K 1/16W | [M] |
| R414 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R417 | D0GB101JA007 | 100 1/16W | [M] |
| R418 | D0GB392JA041 | 3.9K 1/16W | [M] |
| R419 | D0GB391JA041 | 390 1/16W | [M] |
| R420 | D0GB272JA041 | 2.7K 1/16W | [M] |
| R421 | D0GB123JA007 | 12K 1/16W | [M] |
| R422 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R424 | D0GB392JA041 | 3.9K 1/16W | [M] |
| R429 | D0AF100JA039 | 10 1/4W | [M] |
| R430 | D0AF100JA039 | 10 1/4W | [M] |
| R431 | D0AF100JA039 | 10 1/4W | [M] |
| R432 | D0AF100JA039 | 10 1/4W | [M] |
| R440 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R450 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R452 | D0GB101JA007 | 100 1/16W | [M] |
| R453 | D0GB101JA007 | 100 1/16W | [M] |
| R455 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R456 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R457 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R458 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R459 | D0GB101JA007 | 100 1/16W | [M] |
| R461 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R462 | ERD2FCVG100T | 10 1/4W | [M] |
| R471 | ERJ6GEYJ394V | 390K 1/10W | [M] |
| R472 | ERJ6GEYJ272V | 2.7K 1/10W | [M] |
| R473 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R474 | ERJ3GEYJ102V | 1K 1/16W | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| **R475** | **D0GB182JA007** | **1.8K 1/16W** | **[M]** |
| **R476** | **D0GB392JA041** | **3.9K 1/16W** | **[M]** |
| **R479** | **ERJ3GEYJ102V** | **1K 1/16W** | **[M]** |
| **R480** | **D0GB473JA041** | **47K 1/16W** | **[M]** |
| **R505** | **D0AE563JA048** | **56K 1/4W** | **[M]** |
| **R506** | **D0AE563JA048** | **56K 1/4W** | **[M]** |
| **R511** | **D0AF102JA039** | **1K 1/4W** | **[M]** |
| **R512** | **D0AF151JA039** | **150 1/4W** | **[M]** |
| **R514** | **D0AE563JA048** | **56K 1/4W** | **[M]** |
| **R515** | **D0AE563JA048** | **56K 1/4W** | **[M]** |
| **R517** | **D0AE331JA048** | **330 1/4W** | **[M]** |
| **R518** | **D0AE122JA048** | **1.2K 1/4W** | **[M]** |
| **R519** | **ERDS2TJ2R2T** | **2.2 1/4W** | **[M]** |
| **R520** | **ERDS2TJ2R2T** | **2.2 1/4W** | **[M]** |
| **R524** | **ERDS2TJ2R2T** | **2.2 1/4W** | **[M]** |
| **R526** | **D0AE103JA048** | **10K 1/4W** | **[M]** |
| **R532** | **D0AE153JA048** | **15K 1/4W** | **[M]** |
| **R533** | **D0AE153JA048** | **15K 1/4W** | **[M]** |
| **R534** | **D0AF331JA039** | **330 1/4W** | **[M]** |
| **R536** | **ERDS1FVJ2R2T** | **2.2 1/2W** | **[M]** |
| **R537** | **ERDS2TJ222T** | **2.2K 1/4W** | **[M]** |
| **R539** | **D0AF221JA039** | **220 1/4W** | **[M]** |
| **R540** | **D0AE153JA048** | **15K 1/4W** | **[M]** |
| **R541** | **D0AE153JA048** | **15K 1/4W** | **[M]** |
| **R542** | **ERDS2TJ332T** | **3.3K 1/4W** | **[M]** |
| **R543** | **ERDS2TJ332T** | **3.3K 1/4W** | **[M]** |
| **R544** | **D0AE562JA048** | **5.6K 1/4W** | **[M]** |
| **R545** | **D0AE562JA048** | **5.6K 1/4W** | **[M]** |
| **R546** | **D0AE223JA048** | **22K 1/4W** | **[M]** |
| **R547** | **D0AE274JA048** | **270K 1/4W** | **[M]** |
| **R548** | **ERDS2TJ224T** | **220K 1/4W** | **[M]** |
| **R549** | **ERDS1FVJ2R2T** | **2.2 1/2W** | **[M]** |
| **R550** | **D0AF331JA039** | **330 1/4W** | **[M]** |
| **R551** | **D0AE104JA048** | **100K 1/4W** | **[M]** |
| **R554** | **D0AF331JA039** | **330 1/4W** | **[M]** |
| **R556** | **ERDS1FVJ2R2T** | **2.2 1/2W** | **[M]** |
| **R561** | **ERDS2TJ334T** | **330K 1/4W** | **[M]** |
| **R562** | **ERDS2TJ394T** | **390K 1/4W** | **[M]** |
| **R565** | **D0AE123JA048** | **12K 1/4W** | **[M]** |
| **R566** | **D0AE103JA048** | **10K 1/4W** | **[M]** |
| **R567** | **ERDS2TJ151T** | **150 1/4W** | **[M]** |
| **R568** | **D0AF150JA039** | **15 1/4W** | **[M]** |
| **R569** | **D0AF270JA039** | **27 1/4W** | **[M]** |
| **R571** | **D0AF332JA039** | **3.3K 1/4W** | **[M]** |
| **R572** | **ERDS2TJ561T** | **560 1/4W** | **[M]** |
| **R573** | **D0AE272JA048** | **2.7K 1/4W** | **[M]** |
| **R574** | **D0AE272JA048** | **2.7K 1/4W** | **[M]** |
| **R576** | **D0AE103JA048** | **10K 1/4W** | **[M]** |
| **R577** | **D0AE103JA048** | **10K 1/4W** | **[M]** |
| **R578** | **ERDS2TJ332T** | **3.3K 1/4W** | **[M]** |
| **R580** | **D0AF180JA039** | **18 1/4W** | **[M]** |
| **R581** | **D0AF180JA039** | **18 1/4W** | **[M]** |
| **R583** | **ERDS2TJ821T** | **820 1/4W** | **[M]** |
| **R584** | **ERDS2TJ151T** | **150 1/4W** | **[M]** |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R585 | D0AF220JA039 | 22 1/4W | [M] |
| R586 | ERDS2TJ151T | 150 1/4W | [M] |
| R587 | D0AE472JA048 | 4.7K 1/4W | [M] |
| R589 | ERD2FCVJ4R7T | 4.7 1/4W | [M] |
| R591 | D0AE101JA048 | 100 1/4W | [M] |
| R600 | ERJ3GEYJ680V | 68 1/16W | [M] |
| R601 | ERJ3GEYJ680V | 68 1/16W | [M] |
| R602 | D0GB470JA008 | 47 1/16W | [M] |
| R603 | D0GB273JA007 | 27K 1/16W | [M] |
| R604 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R605 | D0GB223JA041 | 22K 1/16W | [M] |
| R606 | D0GB123JA007 | 12K 1/16W | [M] |
| R607 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R608 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R609 | D0GB182JA007 | 1.8K 1/16W | [M] |
| R610 | D0GB222JA041 | 2.2K 1/16W | [M] |
| R611 | D0GB272JA041 | 2.7K 1/16W | [M] |
| R614 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R615 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R616 | ERJ3GEYJ122V | 1.2K 1/16W | [M] |
| R617 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R618 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R619 | ERJ3GEYJ122V | 1.2K 1/16W | [M] |
| R620 | ERJ3GEYJ682V | 6.8K 1/16W | [M] |
| R621 | D0GB182JA007 | 1.8K 1/16W | [M] |
| R622 | D0GB222JA041 | 2.2K 1/16W | [M] |
| R623 | D0GB272JA041 | 2.7K 1/16W | [M] |
| R624 | ERJ3GEYJ122V | 1.2K 1/16W | [M] |
| R626 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R627 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R628 | D0GB223JA041 | 22K 1/16W | [M] |
| R629 | D0GB391JA041 | 390 1/16W | [M] |
| R631 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R632 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R633 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R634 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R636 | D0GB471JA041 | 470 1/16W | [M] |
| R639 | ERJ3GEYJ682V | 6.8K 1/16W | [M] |
| R640 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R700 | D0AF180JA039 | 18 1/4W | [M] |
| R701 | D0AE563JA048 | 56K 1/4W | [M] |
| R701 | D0GB4R7JA007 | 4.7 1/16W | [M] |
| R702 | D0AE101JA048 | 100 1/4W | [M] |
| R702 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R703 | D0AE103JA048 | 10K 1/4W | [M] |
| R704 | D0AE563JA048 | 56K 1/4W | [M] |
| R704 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R705 | D0AE103JA048 | 10K 1/4W | [M] |
| R705 | D0GB393JA041 | 39K 1/16W | [M] |
| R706 | D0AE472JA048 | 4.7K 1/4W | [M] |
| R706 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R707 | D0AE562JA048 | 5.6K 1/4W | [M] |
| R708 | D0AE103JA048 | 10K 1/4W | [M] |
| R709 | ERDS2TJ824T | 820K 1/4W | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R710 | D0AE563JA048 | 56K 1/4W | [M] |
| R711 | D0GB823JA007 | 82K 1/16W | [M] |
| R711 | ERDS2TJ824T | 820K 1/4W | [M] |
| R712 | D0AE102JA048 | 1K 1/4W | [M] |
| R712 | D0GB821JA007 | 820 1/16W | [M] |
| R713 | D0AE563JA048 | 56K 1/4W | [M] |
| R714 | D0GB471JA041 | 470 1/16W | [M] |
| R715 | D0GB332JA007 | 3.3K 1/16W | [M] |
| R717 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R718 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R720 | D0GB105JA007 | 1M 1/16W | [M] |
| R720 | ERDS2TJ823T | 82K 1/4W | [M] |
| R721 | D0GB101JA007 | 100 1/16W | [M] |
| R721 | ERDS2TJ823T | 82K 1/4W | [M] |
| R722 | D0AE104JA048 | 100K 1/4W | [M] |
| R723 | D0AE102JA048 | 1K 1/4W | [M] |
| R723 | D0GB332JA007 | 3.3K 1/16W | [M] |
| R724 | D0AE104JA048 | 100K 1/4W | [M] |
| R725 | D0AE102JA048 | 1K 1/4W | [M] |
| R725 | D0GB331JA007 | 330 1/16W | [M] |
| R726 | ERDS2TJ273T | 27K 1/4W | [M] |
| R727 | D0AE104JA048 | 100K 1/4W | [M] |
| R727 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R728 | D0AE102JA048 | 1K 1/4W | [M] |
| R728 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R729 | D0AE102JA048 | 1K 1/4W | [M] |
| R729 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R730 | ERDS2TJ224T | 220K 1/4W | [M] |
| R731 | D0GB223JA041 | 22K 1/16W | [M] |
| R731 | ERDS2TJ682T | 6.8K 1/4W | [M] |
| R732 | D0AE153JA048 | 15K 1/4W | [M] |
| R732 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R733 | D0AE153JA048 | 15K 1/4W | [M] |
| R734 | D0AE221JA048 | 220 1/4W | [M] |
| R735 | D0GB101JA007 | 100 1/16W | [M] |
| R735 | ERDS2TJ224T | 220K 1/4W | [M] |
| R736 | D0GB101JA007 | 100 1/16W | [M] |
| R736 | ERDS2TJ682T | 6.8K 1/4W | [M] |
| R737 | D0AE122JA048 | 1.2K 1/4W | [M] |
| R738 | D0AE153JA048 | 15K 1/4W | [M] |
| R739 | D0AE122JA048 | 1.2K 1/4W | [M] |
| R739 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R740 | D0AE153JA048 | 15K 1/4W | [M] |
| R741 | D0AE562JA048 | 5.6K 1/4W | [M] |
| R742 | D0AE562JA048 | 5.6K 1/4W | [M] |
| R743 | D0AE122JA048 | 1.2K 1/4W | [M] |
| R744 | D0AE153JA048 | 15K 1/4W | [M] |
| R744 | D0GB473JA041 | 47K 1/16W | [M] |
| R745 | D0AE562JA048 | 5.6K 1/4W | [M] |
| R746 | D0AE562JA048 | 5.6K 1/4W | [M] |
| R747 | D0AE122JA048 | 1.2K 1/4W | [M] |
| R748 | ERDS2TJ152T | 1.5K 1/4W | [M] |
| R749 | D0GB183JA007 | 18K 1/16W | [M] |
| R749 | ERDS2TJ152T | 1.5K 1/4W | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R750 | ERDS2TJ332T | 3.3K 1/4W | [M] |
| R751 | ERDS2TJ332T | 3.3K 1/4W | [M] |
| R752 | D0AE104JA048 | 100K 1/4W | [M] |
| R753 | D0GB100JA007 | 10 1/16W | [M] |
| R753 | ERDS2TJ222T | 2.2K 1/4W | [M] |
| R754 | D0GB5R6JA007 | 5.6 1/16W | [M] |
| R754 | ERDS2TJ220T | 22 1/4W | [M] |
| R755 | ERDS2TJ220T | 22 1/4W | [M] |
| R756 | ERDS2TJ220T | 22 1/4W | [M] |
| R757 | ERDS2TJ220T | 22 1/4W | [M] |
| R758 | ERDS2TJ222T | 2.2K 1/4W | [M] |
| R759 | D0AE472JA048 | 4.7K 1/4W | [M] |
| R760 | D0AE223JA048 | 22K 1/4W | [M] |
| R760 | D0GB101JA007 | 100 1/16W | [M] |
| R761 | D0AE223JA048 | 22K 1/4W | [M] |
| R762 | D0AE562JA048 | 5.6K 1/4W | [M] |
| R763 | D0AE562JA048 | 5.6K 1/4W | [M] |
| R764 | ERDS2TJ683T | 68K 1/4W | [M] |
| R764 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R765 | ERDS2TJ683T | 68K 1/4W | [M] |
| R766 | D0AE103JA048 | 10K 1/4W | [M] |
| R766 | D0GB562JA007 | 5.6K 1/16W | [M] |
| R767 | D0AE103JA048 | 10K 1/4W | [M] |
| R768 | D0AE472JA048 | 4.7K 1/4W | [M] |
| R769 | D0AE472JA048 | 4.7K 1/4W | [M] |
| R770 | ERDS2TJ332T | 3.3K 1/4W | [M] |
| R771 | D0AE104JA048 | 100K 1/4W | [M] |
| R772 | D0AE472JA048 | 4.7K 1/4W | [M] |
| R773 | D0AE102JA048 | 1K 1/4W | [M] |
| R774 | D0AE104JA048 | 100K 1/4W | [M] |
| R775 | D0AE153JA048 | 15K 1/4W | [M] |
| R776 | D0AE102JA048 | 1K 1/4W | [M] |
| R777 | D0AE221JA048 | 220 1/4W | [M] |
| R778 | D0AE153JA048 | 15K 1/4W | [M] |
| R779 | D0AE153JA048 | 15K 1/4W | [M] |
| R780 | D0AE473JA048 | 47K 1/4W | [M] |
| R781 | D0AE473JA048 | 47K 1/4W | [M] |
| R788 | D0AE104JA048 | 100K 1/4W | [M] |
| R789 | D0AE104JA048 | 100K 1/4W | [M] |
| R790 | D0AE272JA048 | 2.7K 1/4W | [M] |
| R791 | D0AE272JA048 | 2.7K 1/4W | [M] |
| R798 | D0AE102JA048 | 1K 1/4W | [M] |
| R799 | D0AE102JA048 | 1K 1/4W | [M] |
| R972 | ERDS2TJ821T | 820 1/4W | [M] |
| R973 | ERDS2TJ393T | 39K 1/4W | [M] |
| R1061 | ERJ3GEY0R00V | 0 1/16W | [M] |
| R1063 | ERJ3GEY0R00V | 0 1/16W | [M] |
| R1064 | ERJ3GEY0R00V | 0 1/16W | [M] |
| R1101 | D0GB330JA007 | 33 1/16W | [M] |
| R1102 | D0GB152JA007 | 1.5K 1/16W | [M] |
| R1103 | D0GB183JA007 | 18K 1/16W | [M] |
| R1104 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1105 | D0GB222JA041 | 2.2K 1/16W | [M] |
| R1106 | D0GB104JA007 | 100K 1/16W | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R1107 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R1109 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R1110 | D0GB333JA007 | 33K 1/16W | [M] |
| R1201 | D0GB330JA007 | 33 1/16W | [M] |
| R1202 | D0GB152JA007 | 1.5K 1/16W | [M] |
| R1203 | D0GB183JA007 | 18K 1/16W | [M] |
| R1204 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1205 | D0GB222JA041 | 2.2K 1/16W | [M] |
| R1206 | D0GB104JA007 | 100K 1/16W | [M] |
| R1207 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R1209 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R1210 | D0GB333JA007 | 33K 1/16W | [M] |
| R1302 | D0GB471JA041 | 470 1/16W | [M] |
| R1303 | ERJ3GEYJ475V | 4.7M 1/16W | [M] |
| R1304 | D0GB223JA041 | 22K 1/16W | [M] |
| R1305 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1309 | D0AF471JA039 | 470 1/4W | [M] |
| R1313 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1314 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R1318 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1327 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R1328 | D0GB153JA007 | 15K 1/16W | [M] |
| R1329 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R1330 | ERD2FCVJ4R7T | 4.7 1/4W | [M] |
| R1331 | ERJ3GEYJ752V | 7.5K 1/16W | [M] |
| R1332 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1333 | ERD2FCVJ4R7T | 4.7 1/4W | [M] |
| R1334 | D0GB223JA041 | 22K 1/16W | [M] |
| R1335 | D0GB152JA007 | 1.5K 1/16W | [M] |
| R1337 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1338 | D0GB472JA041 | 4.7K 1/16W | [M] |
| R1341 | D0GB471JA041 | 470 1/16W | [M] |
| R1342 | D0GB473JA041 | 47K 1/16W | [M] |
| R1343 | D0GB332JA007 | 3.3K 1/16W | [M] |
| R1344 | D0GB273JA007 | 27K 1/16W | [M] |
| R1345 | ERJ3GEYJ102V | 1K 1/16W | [M] |
| R1371 | D0GB223JA041 | 22K 1/16W | [M] |
| R1374 | D0GB471JA041 | 470 1/16W | [M] |
| R1380 | ERJ3GEY0R00V | 0 1/16W | [M] |
| R1401 | D0GB123JA007 | 12K 1/16W | [M] |
| R1402 | D0GB274JA007 | 270K 1/16W | [M] |
| R1403 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| R1404 | D0GB223JA041 | 22K 1/16W | [M] |
| R1405 | ERJ3GEYJ103V | 10K 1/16W | [M] |
| | | | |
| | | CAPACITORS | |
| | | | |
| C11 | F1D1E103A001 | 0.01 25V | [M] |
| C12 | F2A1C101A234 | 100P 16V | [M] |
| C21 | F1D1E103A001 | 0.01 25V | [M] |
| C22 | F2A1C101A234 | 100P 16V | [M] |
| C201 | ECA1CM331B | 330 16V | [M] |
| C211 | F1H1H471A219 | 470P 50V | [M] |
| C212 | F1H1H102A219 | 1000P 50V | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C214 | F1H1H2210001 | 220P 50V | [M] |
| C217 | ECJ1VC1H102J | 1000P 50V | [M] |
| C219 | ECA1CAK100XB | 10 16V | [M] |
| C220 | ECA1CAK100XB | 10 16V | [M] |
| C222 | ECA1CAK100XB | 10 16V | [M] |
| C224 | ECA1CAK100XB | 10 16V | [M] |
| C234 | ECA1EPX470B | 47 25V | [M] |
| C236 | F1H1E104A029 | 0.1 25V | [M] |
| C237 | F1H1E104A029 | 0.1 25V | [M] |
| C238 | F1H1H682A219 | 6800P 50V | [M] |
| C239 | F1H1H682A219 | 6800P 50V | [M] |
| C240 | F1H1E104A029 | 0.1 25V | [M] |
| C241 | F1H1E104A029 | 0.1 25V | [M] |
| C242 | F1H1H104A783 | 0.1 50V | [M] |
| C243 | F1H1H104A783 | 0.1 50V | [M] |
| C244 | F1H1H104A783 | 0.1 50V | [M] |
| C245 | ECJ1VC1H181J | 180P 50V | [M] |
| C249 | ECJ1VC1H102J | 1000P 50V | [M] |
| C270 | ECJ1VB1H821K | 820P 50V | [M] |
| C271 | ECQV1H274JL3 | 0.27 50V | [M] |
| C272 | ECQV1H274JL3 | 0.27 50V | [M] |
| C301 | F1H1H104A783 | 0.1 50V | [M] |
| C303 | F1H1H471A219 | 470P 50V | [M] |
| C304 | ECJ1VC1H101K | 100P 50V | [M] |
| C306 | ECJ1VC1H101K | 100P 50V | [M] |
| C308 | ECJ1VC1H101K | 100P 50V | [M] |
| C310 | F1H1E103A029 | 0.01 25V | [M] |
| C311 | ECA1AM102B | 1000 10V | [M] |
| C312 | F1J1H104A578 | 0.1 50V | [M] |
| C313 | ECA0JAK101XB | 100 6.3V | [M] |
| C314 | ECA1HAK010XB | 1 50V | [M] |
| C315 | ECJ1VC1H101K | 100P 50V | [M] |
| C316 | ECA1HAK2R2XB | 2.2 50V | [M] |
| C317 | ECJ1VC1H102J | 1000P 50V | [M] |
| C318 | ECJ1VC1H560J | 56P 50V | [M] |
| C319 | F1H1H102A219 | 1000P 50V | [M] |
| C320 | ECJ1VC1H560J | 56P 50V | [M] |
| C321 | ECJ1VC1H680J | 68P 50V | [M] |
| C322 | ECJ1VC1H680J | 68P 50V | [M] |
| C323 | ECJ1VC1H180J | 18P 50V | [M] |
| C324 | ECJ1VC1H220J | 22P 50V | [M] |
| C325 | F1H1E223A002 | 0.022 25V | [M] |
| C326 | F1H1H103A219 | 0.01 50V | [M] |
| C327 | F1H1H2210001 | 220P 50V | [M] |
| C329 | ECJ1VC1H101K | 100P 50V | [M] |
| C331 | ECJ1VC1H101K | 100P 50V | [M] |
| C333 | ECJ1VB1H561K | 560P 50V | [M] |
| C334 | ECJ1VB1H561K | 560P 50V | [M] |
| C335 | ECJ1VB1H561K | 560P 50V | [M] |
| C336 | ECJ1VB1H561K | 560P 50V | [M] |
| C337 | ECJ1VB1H561K | 560P 50V | [M] |
| C338 | ECJ1VB1H561K | 560P 50V | [M] |
| C339 | ECJ1VB1H561K | 560P 50V | [M] |
| C340 | F1H1H104A783 | 0.1 50V | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C341 | ECA0JAK101XB | 100 6.3V | [M] |
| C342 | F1H1H102A219 | 1000P 50V | [M] |
| C343 | F1H1H103A219 | 0.01 50V | [M] |
| C344 | F1H1H101A230 | 100P 50V | [M] |
| C345 | F1H1H101A230 | 100P 50V | [M] |
| C346 | F1H1H470A230 | 47P 50V | [M] |
| C347 | F1H1E103A029 | 0.01 25V | [M] |
| C348 | F1H1H102A219 | 1000P 50V | [M] |
| C349 | ECEA0JKA470B | 47 6.3V | [M] |
| C350 | ECJ1VC1H101K | 100P 50V | [M] |
| C351 | ECJ1VC1H101K | 100P 50V | [M] |
| C352 | ECA1HAK100XB | 10 50V | [M] |
| C353 | F1H1H331A013 | 330P 50V | [M] |
| C354 | ECA1HAK100XB | 10 50V | [M] |
| C355 | F1H1H470A230 | 47P 50V | [M] |
| C356 | ECJ1VC1H561J | 560P 50V | [M] |
| C358 | ECA1CAM221XB | 220 16V | [M] |
| C359 | ECEA1AKA101B | 100 10V | [M] |
| C362 | ECA1AAK220XB | 22 10V | [M] |
| C363 | F1H1H101A230 | 100P 50V | [M] |
| C364 | F1H1H101A230 | 100P 50V | [M] |
| C367 | F1H1H104A783 | 0.1 50V | [M] |
| C368 | F1H1H104A783 | 0.1 50V | [M] |
| C372 | ECA1HAK2R2XB | 2.2 50V | [M] |
| C373 | F1H1H471A219 | 470P 50V | [M] |
| C374 | F1H1H471A219 | 470P 50V | [M] |
| C380 | F1H1H104A783 | 0.1 50V | [M] |
| C381 | ECA1HAK2R2XB | 2.2 50V | [M] |
| C411 | F1H1H471A219 | 470P 50V | [M] |
| C412 | F1H1H102A219 | 1000P 50V | [M] |
| C414 | F1H1H2210001 | 220P 50V | [M] |
| C417 | ECJ1VC1H102J | 1000P 50V | [M] |
| C419 | ECA1CAK100XB | 10 16V | [M] |
| C420 | ECA1CAK100XB | 10 16V | [M] |
| C422 | ECA1CAK100XB | 10 16V | [M] |
| C424 | ECA1CAK100XB | 10 16V | [M] |
| C436 | F1H1E104A029 | 0.1 25V | [M] |
| C437 | F1H1E104A029 | 0.1 25V | [M] |
| C438 | F1H1H682A219 | 6800P 50V | [M] |
| C439 | F1H1H682A219 | 6800P 50V | [M] |
| C440 | F1H1E104A029 | 0.1 25V | [M] |
| C441 | F1H1E104A029 | 0.1 25V | [M] |
| C445 | ECJ1VC1H181J | 180P 50V | [M] |
| C449 | ECJ1VC1H102J | 1000P 50V | [M] |
| C470 | ECJ1VB1H821K | 820P 50V | [M] |
| C471 | ECQV1H274JL3 | 0.27 50V | [M] |
| C472 | ECQV1H274JL3 | 0.27 50V | [M] |
| C500 | F1D1H821A012 | 820P 50V | [M] |
| C501 | F1D1H821A012 | 820P 50V | [M] |
| C502 | F1D1H821A012 | 820P 50V | [M] |
| C503 | F1D1H821A012 | 820P 50V | [M] |
| C504 | F1D1H390A006 | 39P 50V | [M] |
| C505 | F1D1H390A006 | 39P 50V | [M] |
| C506 | ECA1HAM222XE | 2200 50V | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C507 | ECA1HAM222XE | 2200 50V | [M] |
| C508 | ECA1EAM332XE | 3300 25V | [M] |
| C509 | F1D1H330A041 | 33P 50V | [M] |
| C510 | F1D1H330A041 | 33P 50V | [M] |
| C511 | F1B1H103A007 | 0.01 50V | [M] |
| C512 | ECA1CAM101XB | 100 16V | [M] |
| C515 | F1E1H1030001 | 0.01 50V | [M] |
| C516 | ECA1HAK100XB | 10 50V | [M] |
| C517 | F1B2H103A032 | 0.01 500V | [M] |
| C518 | F1B1H103A007 | 0.01 50V | [M] |
| C520 | F1B1H103A007 | 0.01 50V | [M] |
| C521 | ECA1CAK330XB | 33 16V | [M] |
| C526 | ECA1HM330B | 33 50V | [M] |
| C528 | F1B1H103A007 | 0.01 50V | [M] |
| C530 | ECQE2104KF3 | 0.1 250V | [M] |
| C533 | ECQV1H104JL3 | 0.1 50V | [M] |
| C535 | ECQV1H104JL3 | 0.1 50V | [M] |
| C536 | ECA0JAK221XB | 220 6.3V | [M] |
| C537 | F1D1H102A012 | 1000P 50V | [M] |
| C538 | ECA1CAK220XB | 22 16V | [M] |
| C539 | F1B1H103A007 | 0.01 50V | [M] |
| C548 | ECKR1H103KB5 | 0.01 50V | [M] |
| C575 | ECA1HAK4R7XB | 4.7 50V | [M] |
| C578 | F1B1H103A007 | 0.01 50V | [M] |
| C580 | F1B1H103A007 | 0.01 50V | [M] |
| C581 | ECA1AAK470XB | 47 10V | [M] |
| C582 | ECQV1H104JL3 | 0.1 50V | [M] |
| C583 | F1B1H103A007 | 0.01 50V | [M] |
| C584 | ECA1CAM102XB | 1000 16V | [M] |
| C585 | ECA1EAM101XB | 100 25V | [M] |
| C586 | ECA2AM100B | 10 100V | [M] |
| C587 | ECA1JM101B | 100 63V | [M] |
| C588 | ECA1JM101B | 100 63V | [M] |
| C600 | ECA1HAK220XB | 22 50V | [M] |
| C601 | ECA1HAK220XB | 22 50V | [M] |
| C602 | ECA1HAK220XB | 22 50V | [M] |
| C603 | F1H1H102A219 | 1000P 50V | [M] |
| C604 | F1H1E223A002 | 0.022 25V | [M] |
| C605 | F1H1E223A002 | 0.022 25V | [M] |
| C606 | ECJ1VC1H330J | 33P 50V | [M] |
| C608 | ECEA0JKA470B | 47 6.3V | [M] |
| C609 | F1H1H103A219 | 0.01 50V | [M] |
| C610 | F1H1H102A219 | 1000P 50V | [M] |
| C611 | F1H1H101A230 | 100P 50V | [M] |
| C612 | F1H1H101A230 | 100P 50V | [M] |
| C613 | ECA1AAK220XB | 22 10V | [M] |
| C614 | F1H1H103A219 | 0.01 50V | [M] |
| C615 | F1H1H2210001 | 220P 50V | [M] |
| C616 | F1H1H2210001 | 220P 50V | [M] |
| C617 | F1H1H2210001 | 220P 50V | [M] |
| C618 | F1H1H103A219 | 0.01 50V | [M] |
| C619 | F1H1H104A783 | 0.1 50V | [M] |
| C620 | ECA1HAK220XB | 22 50V | [M] |
| C621 | F1H1H104A783 | 0.1 50V | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C622 | F1H1H2210001 | 220P 50V | [M] |
| C700 | ECA0JAK101XB | 100 6.3V | [M] |
| C701 | ECA1CAK330XB | 33 16V | [M] |
| C701 | ECEA0JKA330I | 33 6.3V | [M] |
| C702 | ECA1HAK2R2XB | 2.2 50V | [M] |
| C702 | F1H1A4740009 | 0.47 10V | [M] |
| C703 | ECEA0JKA101I | 100 6.3V | [M] |
| C703 | F1D1H1040002 | 0.1 50V | [M] |
| C704 | ECA0JAK221XB | 220 6.3V | [M] |
| C704 | F1H1C104A041 | 0.1 16V | [M] |
| C705 | ECEA1AKN100B | 10 10V | [M] |
| C705 | F1H1C104A041 | 0.1 16V | [M] |
| C706 | F1H1C104A041 | 0.1 16V | [M] |
| C707 | F1H1E223A002 | 0.022 25V | [M] |
| C709 | F1D1H102A012 | 1000P 50V | [M] |
| C710 | ECJ1VC1H471J | 470P 50V | [M] |
| C710 | F1D1H102A012 | 1000P 50V | [M] |
| C711 | ECA1CAK100XB | 10 16V | [M] |
| C712 | F1D1C122A010 | 1200P 16V | [M] |
| C713 | ECEA1HKAR68B | 0.68 50V | [M] |
| C713 | F1H1C104A041 | 0.1 16V | [M] |
| C714 | ECEA0JKA101I | 100 6.3V | [M] |
| C714 | F1C1C273A003 | 0.027 16V | [M] |
| C715 | F1D1C122A010 | 1200P 16V | [M] |
| C715 | F1H1A4740009 | 0.47 10V | [M] |
| C716 | ECEA1HKAR68B | 0.68 50V | [M] |
| C716 | ECJ1VB1H681K | 680P 50V | [M] |
| C717 | F1C1C273A003 | 0.027 16V | [M] |
| C717 | F1H1C104A041 | 0.1 16V | [M] |
| C718 | ECJ1VB1C823K | 0.082 16V | [M] |
| C720 | ECEA1HKN010B | 1 50V | [M] |
| C721 | ECJ1VC1H180J | 18P 50V | [M] |
| C721 | F1D1C562A010 | 5600P 16V | [M] |
| C722 | F1D1C562A010 | 5600P 16V | [M] |
| C722 | F1H1H220A230 | 22P 50V | [M] |
| C723 | ECEA0JKA221I | 220 6.3V | [M] |
| C723 | ECEA1HKN010B | 1 50V | [M] |
| C724 | F1D1C562A010 | 5600P 16V | [M] |
| C724 | F1H1C104A041 | 0.1 16V | [M] |
| C725 | F1D1C562A010 | 5600P 16V | [M] |
| C725 | F1H1H102A219 | 1000P 50V | [M] |
| C726 | ECA1CAK100XB | 10 16V | [M] |
| C726 | F1H1H102A219 | 1000P 50V | [M] |
| C727 | ECA1CAK100XB | 10 16V | [M] |
| C727 | ECA1HAK010XI | 1 50V | [M] |
| C728 | ECA1HAK010XI | 1 50V | [M] |
| C728 | F1D1H332A046 | 3300P 50V | [M] |
| C729 | ECEA1CKA100I | 10 16V | [M] |
| C729 | F1D1H332A046 | 3300P 50V | [M] |
| C730 | ECA1HAK3R3XB | 3.3 50V | [M] |
| C730 | F1H1C104A041 | 0.1 16V | [M] |
| C731 | ECA0JAK221XI | 220 6.3V | [M] |
| C731 | ECA1HAK3R3XB | 3.3 50V | [M] |
| C733 | ECA1HAKR47XB | 0.47 50V | [M] |

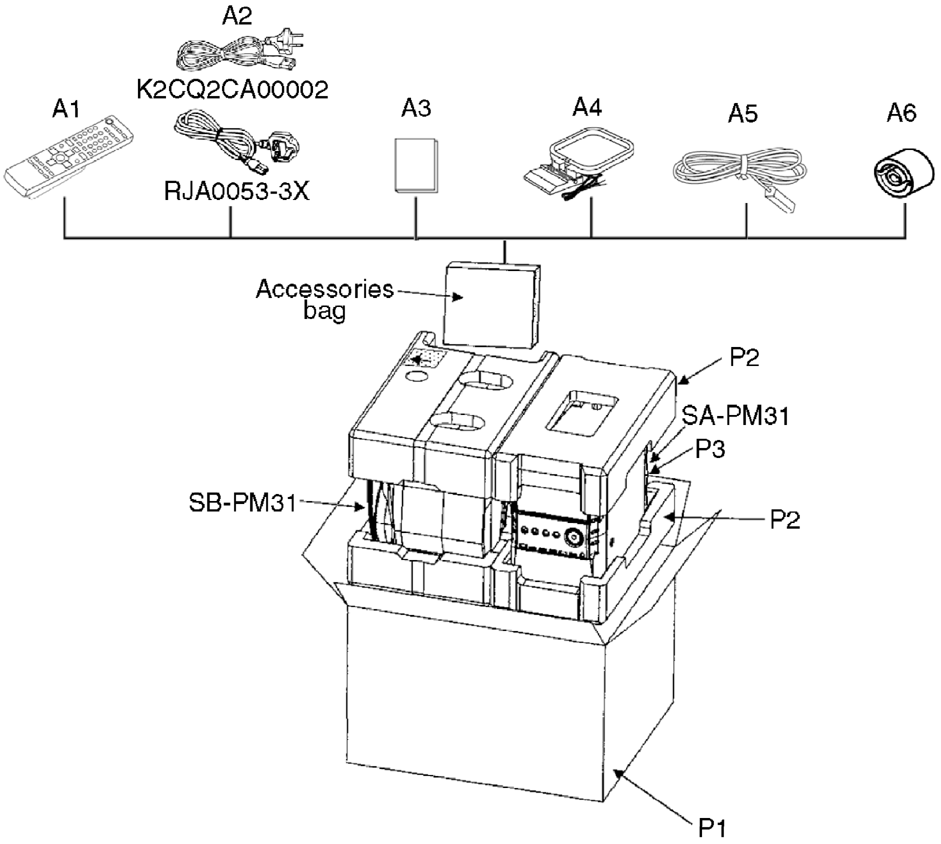
| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C733 | F1H1C104A041 | 0.1 16V | [M] |
| C734 | ECA1HAKR47XB | 0.47 50V | [M] |
| C734 | ECEA1AKA221I | 220 10V | [M] |
| C735 | F1H1E104A030 | 0.1 25V | [M] |
| C736 | F1B1H223A007 | 0.022 50V | [M] |
| C737 | F1B1H223A007 | 0.022 50V | [M] |
| C738 | ECA1CAK100XB | 10 16V | [M] |
| C738 | ECJ1VB1C563K | 0.056 16V | [M] |
| C739 | F1D1C122A010 | 1200P 16V | [M] |
| C739 | F1H1E1830001 | 0.018 25V | [M] |
| C740 | F1D1C122A010 | 1200P 16V | [M] |
| C740 | F1H1C104A041 | 0.1 16V | [M] |
| C741 | ECA1HAKR47XB | 0.47 50V | [M] |
| C741 | F1H1H102A219 | 1000P 50V | [M] |
| C742 | ECA1HAKR47XB | 0.47 50V | [M] |
| C742 | F1H1E223A002 | 0.022 25V | [M] |
| C743 | F1E1H1030001 | 0.01 50V | [M] |
| C743 | F1H1E104A030 | 0.1 25V | [M] |
| C744 | F1E1H1030001 | 0.01 50V | [M] |
| C744 | F1H1E1530002 | 0.015 25V | [M] |
| C745 | F1D1H101A012 | 100P 50V | [M] |
| C745 | F1H1E103A029 | 0.01 25V | [M] |
| C746 | F1D1H101A012 | 100P 50V | [M] |
| C746 | F1H1C104A041 | 0.1 16V | [M] |
| C747 | F1D1H270A006 | 27P 50V | [M] |
| C747 | F1H1H391A013 | 390P 50V | [M] |
| C748 | F1D1H270A006 | 27P 50V | [M] |
| C749 | ECQB1H103JF3 | 0.01 50V | [M] |
| C749 | F1H1H392A013 | 3900P 50V | [M] |
| C750 | ECQB1H103JF3 | 0.01 50V | [M] |
| C751 | ECA1CAK100XB | 10 16V | [M] |
| C752 | ECA1CAK100XB | 10 16V | [M] |
| C752 | F1H1E1830001 | 0.018 25V | [M] |
| C753 | F1H1H471A219 | 470P 50V | [M] |
| C755 | F1D1H471A012 | 470P 50V | [M] |
| C755 | F1H1C104A041 | 0.1 16V | [M] |
| C756 | F1D1H471A012 | 470P 50V | [M] |
| C759 | ECEA1CKA100I | 10 16V | [M] |
| C760 | F1H1C104A041 | 0.1 16V | [M] |
| C762 | F1D1H102A012 | 1000P 50V | [M] |
| C762 | F1H1C104A041 | 0.1 16V | [M] |
| C1101 | ECA1HAK010XB | 1 50V | [M] |
| C1102 | F1H1H471A219 | 470P 50V | [M] |
| C1103 | ECA1CAK101XB | 100 16V | [M] |
| C1104 | F1H1E273A002 | 0.027 25V | [M] |
| C1105 | F1H1H471A219 | 470P 50V | [M] |
| C1106 | ECA1HAK2R2XB | 2.2 50V | [M] |
| C1107 | F1H1H152A219 | 1500P 50V | [M] |
| C1108 | ECA1CAK100XB | 10 16V | [M] |
| C1109 | ECA1HAK3R3XB | 3.3 50V | [M] |
| C1110 | ECJ1VB1H682K | 6800P 50V | [M] |
| C1121 | F1H1H102A219 | 1000P 50V | [M] |
| C1122 | F1H1E103A029 | 0.01 25V | [M] |
| C1123 | ECJ1VB1H271K | 270P 50V | [M] |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C1201 | ECA1HAK010XB | 1 50V | [M] |
| C1202 | F1H1H471A219 | 470P 50V | [M] |
| C1203 | ECA1CAK101XB | 100 16V | [M] |
| C1204 | F1H1E273A002 | 0.027 25V | [M] |
| C1205 | F1H1H471A219 | 470P 50V | [M] |
| C1206 | ECA1HAK2R2XB | 2.2 50V | [M] |
| C1207 | F1H1H152A219 | 1500P 50V | [M] |
| C1208 | ECA1CAK100XB | 10 16V | [M] |
| C1209 | ECA1HAK3R3XB | 3.3 50V | [M] |
| C1210 | ECJ1VB1H682K | 6800P 50V | [M] |
| C1221 | F1H1H102A219 | 1000P 50V | [M] |
| C1222 | F1H1E103A029 | 0.01 25V | [M] |
| C1223 | ECJ1VB1H271K | 270P 50V | [M] |
| C1301 | ECA1HAK0R1XB | 0.1 50V | [M] |
| C1302 | F1H1C3330001 | 0.033 16V | [M] |
| C1303 | F1H1C3330001 | 0.033 16V | [M] |
| C1304 | ECEA1HKA4R7B | 4.7 50V | [M] |
| C1305 | ECA1CAK330XB | 33 16V | [M] |
| C1307 | ECA1AAK221XQ | 220 10V | [M] |
| C1308 | ECA1CAK220XB | 22 16V | [M] |
| C1310 | ECA1HAK0R1XB | 0.1 50V | [M] |
| C1311 | ECA1CAK470XB | 47 16V | [M] |
| C1312 | F1H1H332A013 | 3300P 50V | [M] |
| C1314 | F1H1H222A013 | 2200P 50V | [M] |
| C1315 | F1H1H222A013 | 2200P 50V | [M] |
| C1316 | F1H1H102A219 | 1000P 50V | [M] |
| C1317 | F1H1H102A219 | 1000P 50V | [M] |
| C1318 | ECQV1H473JL3 | 0.047 50V | [M] |
| C1319 | ECA1CAK101XB | 100 16V | [M] |
| C1320 | ECA1HAK010XB | 1 50V | [M] |
| C1321 | F0A2A472A019 | 4700P 100V | [M] |
| C1323 | ECEA1HKN010B | 1 50V | [M] |
| C1324 | ECA1CAK470XB | 47 16V | [M] |
| C1326 | ECA1CAK100XB | 10 16V | [M] |
| C1371 | F1H1E103A029 | 0.01 25V | [M] |
|  |  |  |  |

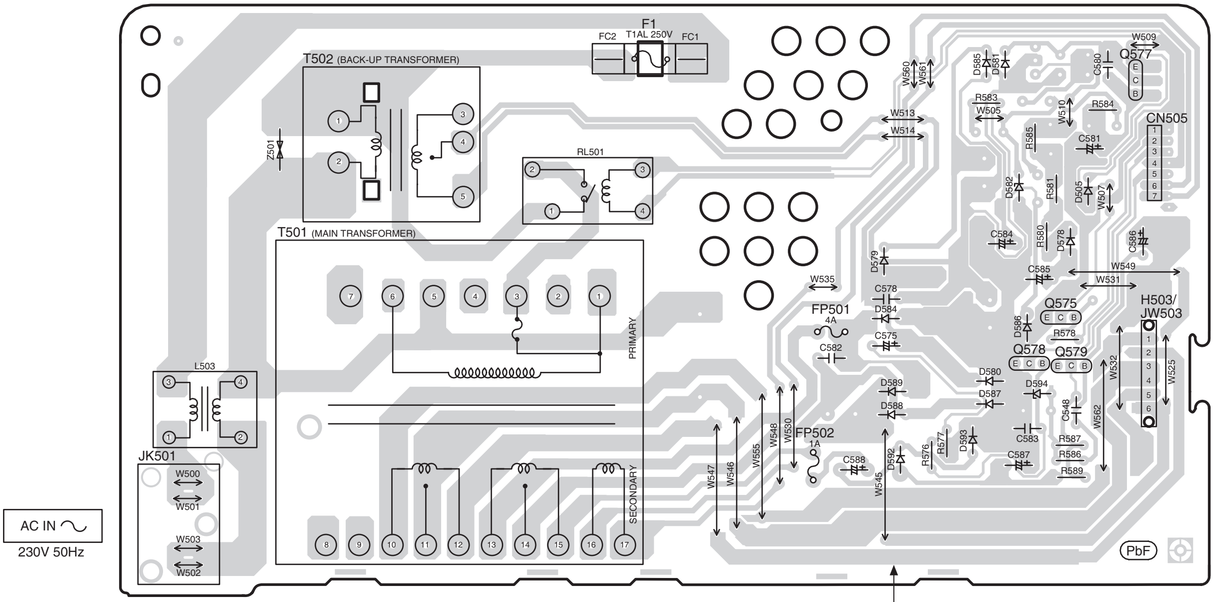
## 25.5. Packaging Materials & Accessories Parts List

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
|  |  | PACKING MATERIALS |  |
|  |  |  |  |
| P1 | RPGV0177 | PACKING CASE | [M]EB EG |
| P1 | RPGV0236 | PACKING CASE | [M]E |
| P2 | RPNV0061 | POLYFOAM | [M] |
| P3 | RPHV0001-1 | MIRAMAT SHEET | [M] |
|  |  |  |  |
|  |  | ACCESSORIES |  |
|  |  |  |  |
| A1 | N2QAJB000132 | REMOTE CONTROL | [M] |
| A1-1 | RKK-HTR0051K | R/C BATTERY COVER | [M] |
| A2 | K2CQ2CA00002 | AC CORD | [M]EG E ⚠ |
| A2 | RJA0053-3X | AC CORD | [M]EB ⚠ |
| A3 | RQT7926-D | O/I BOOK (Ge/It/Fr) | [M]EG |
| A3 | RQT7927-H | O/I BOOK (Du/Da/Sw) | [M]EG |
| A3 | RQT7928-B | O/I BOOK (En) | [M]EB E |
| A3 | RQT7929-E | O/I BOOK (Sp/Po/Cz) | [M]E |
| A4 | N1DAAAA00001 | AM LOOP ANTENNA | [M] |
| A5 | RSA0007-L | FM ANTENNA | [M] |
| A6 | K1YZ02000013 | ANTENNA PLUG ADAPTOR | [M]EB |

## 25.6. Packaging

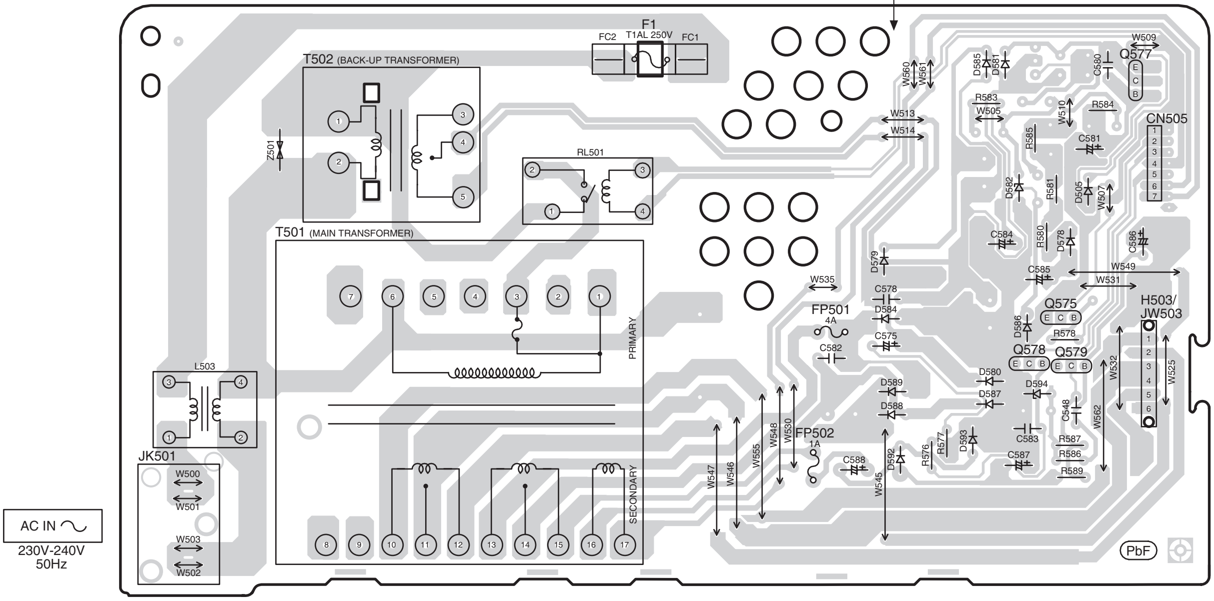

A2
K2CQ2CA00002
RJA0053-3X
A1
A3
A4
A5
A6
Accessories bag
P2
SA-PM31
P3
SB-PM31
P2
P1

# K TRANSFORMER P.C.B (REPV0038B)...E/EG


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
F1
T1AL 250V
FC2
FC1
T502 (BACK-UP TRANSFORMER)
Z501
RL501
T501 (MAIN TRANSFORMER)
PRIMARY
SECONDARY
L503
JK501
W500
W501
W503
W502
AC IN
230V 50Hz
W560
W561
W513
W514
W535
FP501
4A
C582
C578
D584
C575
D579
D589
D588
W547
W546
W555
W548
W530
FP502
1A
C588
D592
W545
R576
R577
D593
D585
D581
R583
W505
W510
R584
C580
Q577
E
C
B
W509
CN505
R585
C581
D582
R581
D505
W507
C584
R580
D578
C586
C585
W549
W531
Q575
D586
R578
Q578
Q579
H503/
JW503
D580
D587
D594
C548
C583
R587
R586
C587
R589
W562
W532
W525
PbF

CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

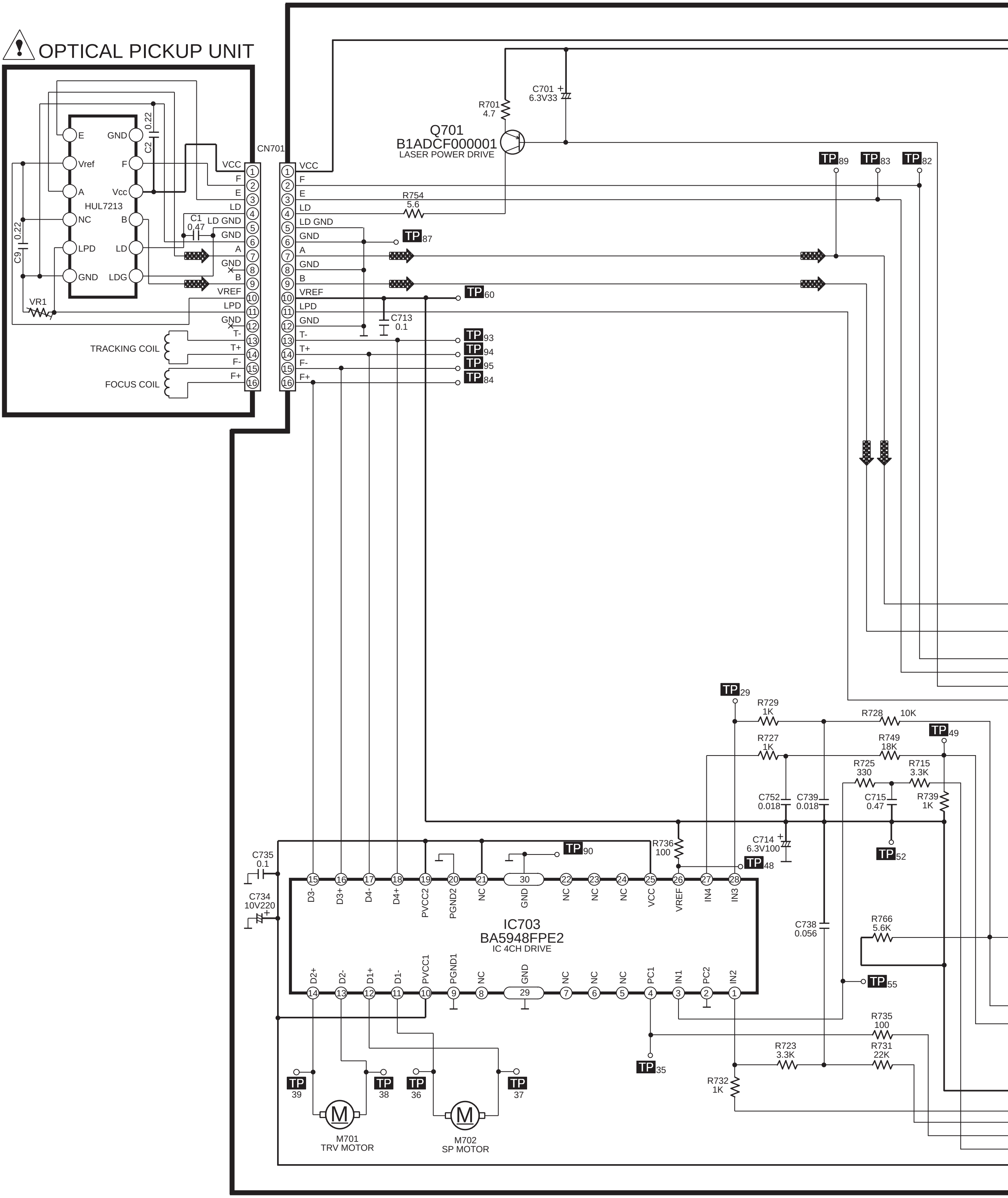
# K TRANSFORMER P.C.B (REPV0038C)...EB


F1
T1AL 250V
FC2
FC1
T502 (BACK-UP TRANSFORMER)
Z501
RL501
T501 (MAIN TRANSFORMER)
PRIMARY
SECONDARY
L503
JK501
W500
W501
W503
W502
AC IN
230V-240V
50Hz
W560
W561
W513
W514
W535
FP501
4A
C582
C578
D584
C575
D579
D589
D588
W547
W546
W555
W548
W530
FP502
1A
C588
D592
W545
R576
R577
D593
D585
D581
R583
W505
W510
R584
C580
Q577
E
C
B
W509
CN505
R585
C581
D582
R581
D505
W507
C584
R580
D578
C586
C585
W549
W531
Q575
D586
R578
Q578
Q579
H503/
JW503
D580
D587
D594
C548
C583
R587
R586
C587
R589
W562
W532
W525
PbF

# SCHEMATIC DIAGRAM - 1

## A CD SERVO CIRCUIT

—— : +B SIGNAL LINE ▨➔ : CD-DA SIGNAL LINE

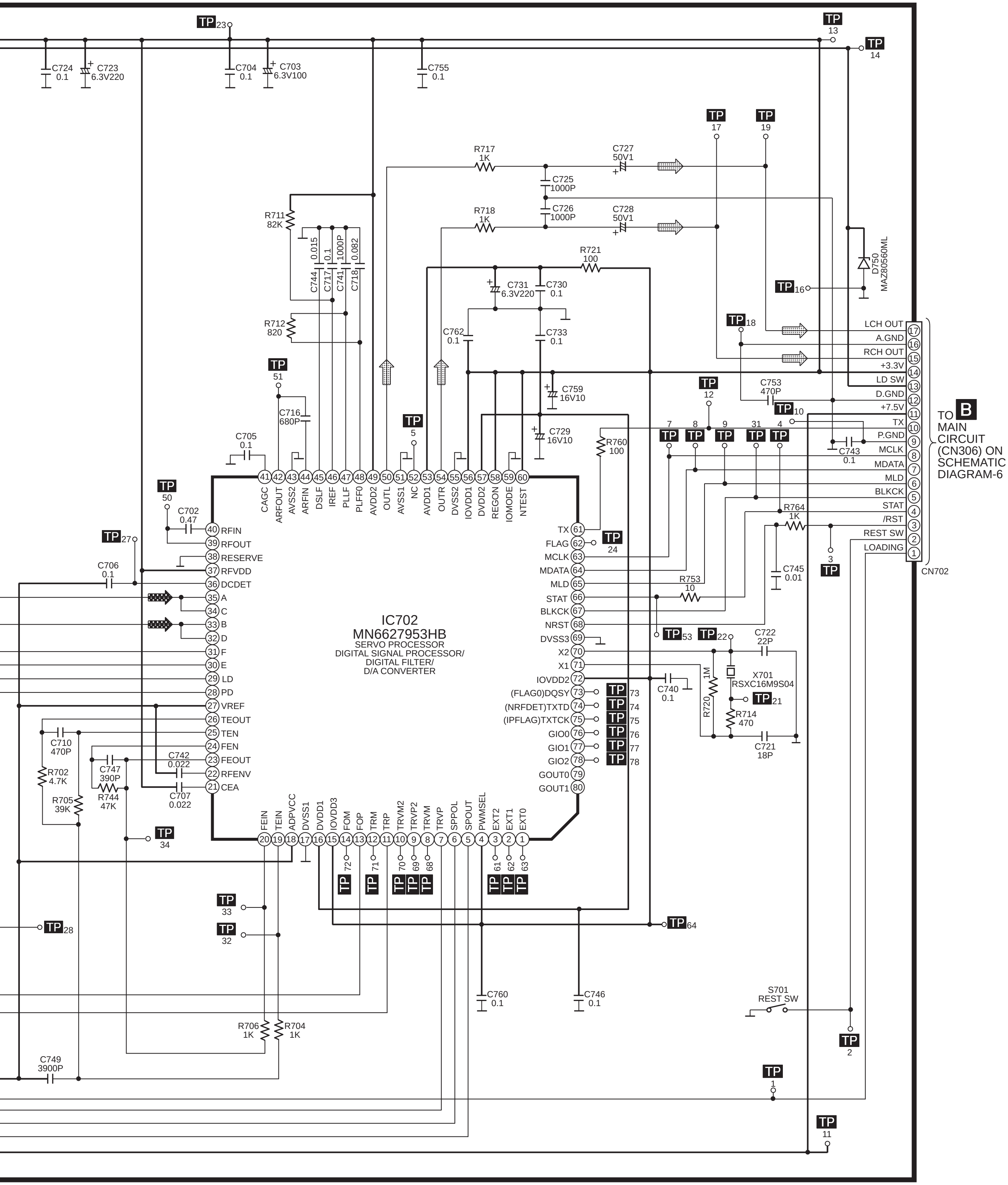


⚠ OPTICAL PICKUP UNIT
HUL7213
E
GND
Vref
F
A
Vcc
NC
B
LPD
LD
GND
LDG
C2 0.22
C1 0.47
C9 0.22
VR1
TRACKING COIL
FOCUS COIL
CN701
VCC
F
E
LD
LD GND
GND
A
GND
B
VREF
LPD
GND
T-
T+
F-
F+
R701 4.7
C701 6.3V33
Q701
B1ADCF000001
LASER POWER DRIVE
R754 5.6
C713 0.1
TP89
TP83
TP82
TP87
TP60
TP93
TP94
TP95
TP84
TP29
R729 1K
R728 10K
TP49
R727 1K
R749 18K
R725 330
R715 3.3K
C752 0.018
C739 0.018
C715 0.47
R739 1K
R736 100
C714 6.3V100
TP52
TP48
TP90
C735 0.1
C734 10V220
C738 0.056
R766 5.6K
IC703
BA5948FPE2
IC 4CH DRIVE
D3-
D3+
D4-
D4+
PVCC2
PGND2
NC
GND
NC
NC
NC
VCC
VREF
IN4
IN3
D2+
D2-
D1+
D1-
PVCC1
PGND1
NC
GND
NC
NC
NC
PC1
IN1
PC2
IN2
TP55
R735 100
R723 3.3K
R731 22K
R732 1K
TP35
TP39
TP38
TP36
TP37
M701
TRV MOTOR
M702
SP MOTOR

# SCHEMATIC DIAGRAM - 2

## A CD SERVO CIRCUIT

— : +B SIGNAL LINE
▨ : CD-DA SIGNAL LINE
▨ : CD SIGNAL LINE



TP 23
C724 0.1
C723 6.3V220
C704 0.1
C703 6.3V100
C755 0.1
TP 13
TP 14
TP 17
TP 19
R717 1K
C727 50V1
C725 1000P
C726 1000P
R718 1K
C728 50V1
R711 82K
0.015 C744
0.1 C717
1000P C741
0.082 C718
R721 100
C731 6.3V220
C730 0.1
D750 MAZ80560ML
TP 16
R712 820
C762 0.1
C733 0.1
TP 18
LCH OUT 17
A.GND 16
RCH OUT 15
+3.3V 14
LD SW 13
D.GND 12
+7.5V 11
TX 10
P.GND 9
MCLK 8
MDATA 7
MLD 6
BLKCK 5
STAT 4
/RST 3
REST SW 2
LOADING 1
CN702
TO B MAIN CIRCUIT (CN306) ON SCHEMATIC DIAGRAM-6
TP 51
C759 16V10
C753 470P
TP 12
TP 10
C716 680P
TP 5
C729 16V10
R760 100
TP 7
TP 8
TP 9
TP 31
TP 4
C743 0.1
C705 0.1
TP 50
C702 0.47
41 CAGC
42 ARFOUT
43 AVSS2
44 ARFIN
45 DSLF
46 IREF
47 PLLF
48 PLFF0
49 AVDD2
50 OUTL
51 AVSS1
52 NC
53 AVDD1
54 OUTR
55 DVSS2
56 IOVDD1
57 DVDD2
58 REGON
59 IOMODE
60 NTEST
R764 1K
TP 27
40 RFIN
39 RFOUT
38 RESERVE
37 RFVDD
36 DCDET
35 A
34 C
33 B
32 D
31 F
30 E
29 LD
28 PD
27 VREF
26 TEOUT
25 TEN
24 FEN
23 FEOUT
22 RFENV
21 CEA
C706 0.1
TX 61
FLAG 62
MCLK 63
MDATA 64
MLD 65
STAT 66
BLKCK 67
NRST 68
DVSS3 69
X2 70
X1 71
IOVDD2 72
(FLAG0)DQSY 73
(NRFDET)TXTD 74
(IPFLAG)TXTCK 75
GIO0 76
GIO1 77
GIO2 78
GOUT0 79
GOUT1 80
TP 24
TP 3
C745 0.01
R753 10
TP 53
TP 22
C722 22P
1M R720
X701 RSXC16M9S04
TP 21
R714 470
C721 18P
C740 0.1
TP 73
TP 74
TP 75
TP 76
TP 77
TP 78
IC702
MN6627953HB
SERVO PROCESSOR
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/
D/A CONVERTER
C710 470P
R702 4.7K
R705 39K
C747 390P
R744 47K
C742 0.022
C707 0.022
TP 34
20 FEIN
19 TEIN
18 ADPVCC
17 DVSS1
16 DVDD1
15 IOVDD3
14 FOM
13 FOP
12 TRM
11 TRP
10 TRVM2
9 TRVP2
8 TRVM
7 TRVP
6 SPPOL
5 SPOUT
4 PWMSEL
3 EXT2
2 EXT1
1 EXT0
TP 72
TP 71
TP 70
TP 69
TP 68
TP 61
TP 62
TP 63
TP 33
TP 32
TP 28
TP 64
C760 0.1
C746 0.1
S701 REST SW
TP 2
TP 1
TP 11
R706 1K
R704 1K
C749 3900P

# SCHEMATIC DIAGRAM-3

## B MAIN CIRCUIT

——— : +B SIGNAL LINE

⇨ : MAIN SIGNAL LINE

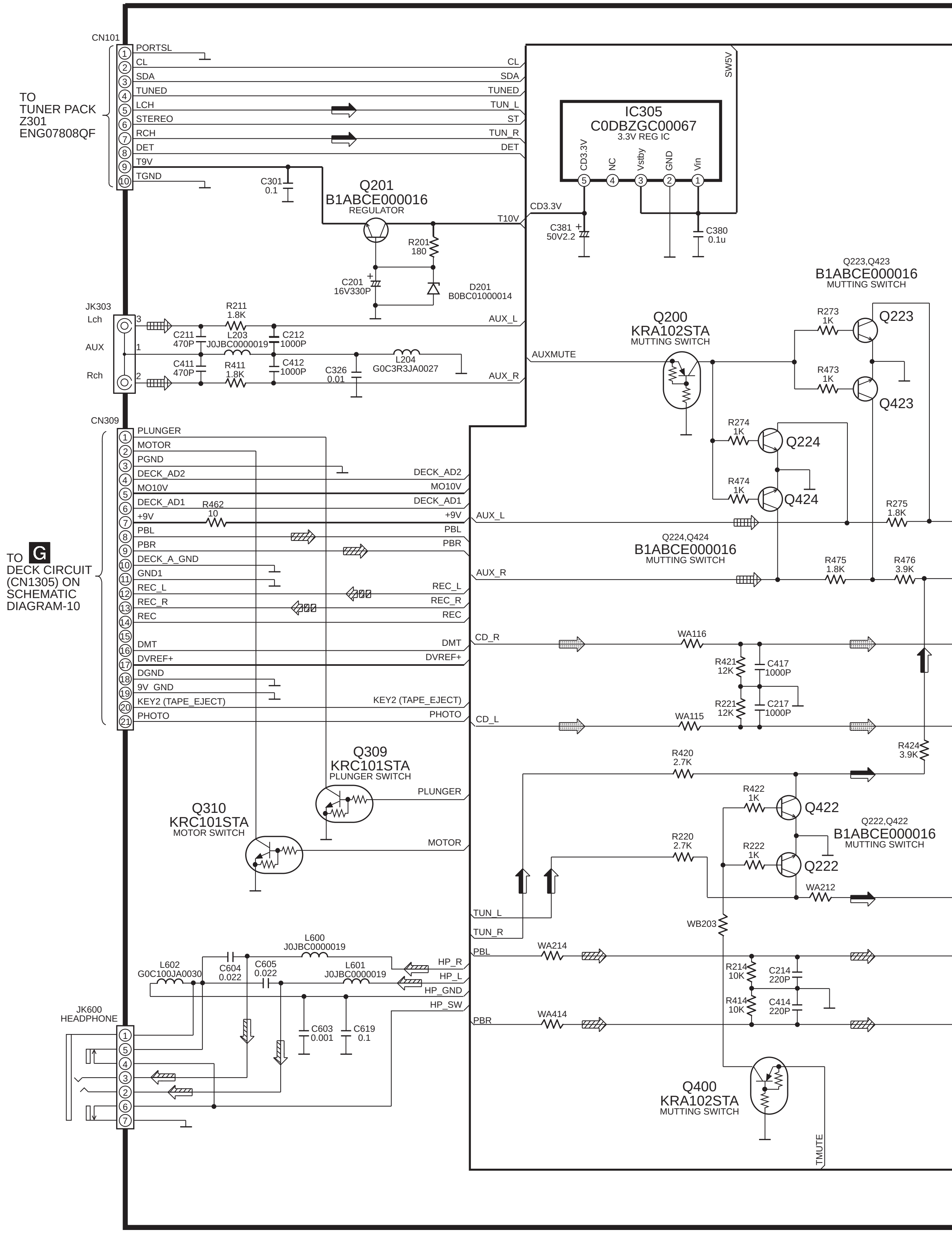
⇨ : TAPE PLAYBACK SIGNAL LINE

⇨ : TAPE RECORD SIGNAL LINE

➡ : FM/AM SIGNAL LINE

⇨ : CD SIGNAL LINE

⇨ : AUX SIGNAL LINE

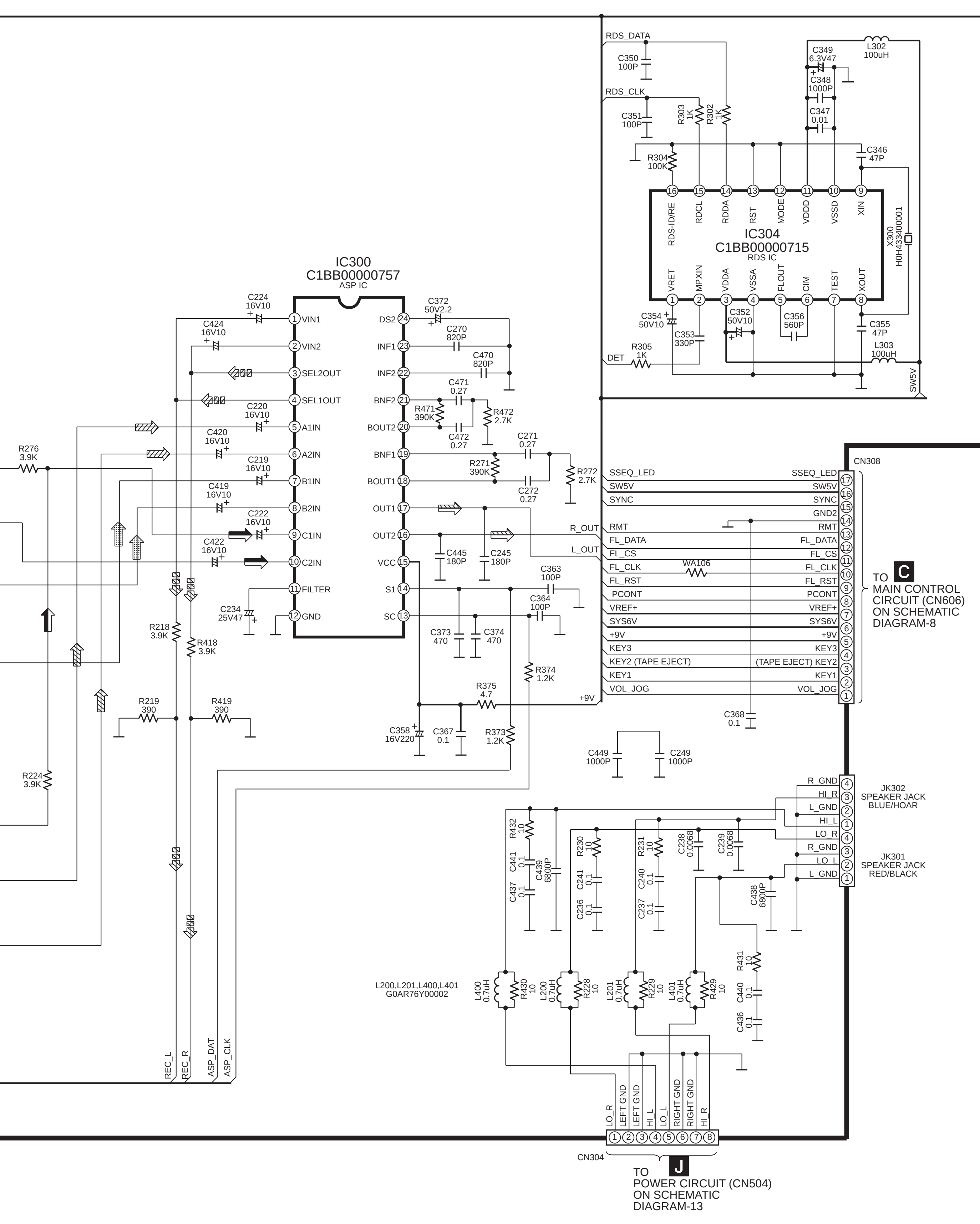


CN101
PORTSL
CL
SDA
TUNED
LCH
STEREO
RCH
DET
T9V
TGND
TO TUNER PACK Z301 ENG07808QF
CL
SDA
TUNED
TUN_L
ST
TUN_R
DET
T10V
SW5V
C301 0.1
Q201 B1ABCE000016 REGULATOR
R201 180
C201 16V330P
D201 B0BC01000014
IC305 C0DBZGC00067 3.3V REG IC
CD3.3V
NC
Vstby
GND
Vin
CD3.3V
C381 50V2.2
C380 0.1u
JK303
Lch
AUX
Rch
R211 1.8K
C211 470P
L203 J0JBC0000019
C212 1000P
C411 470P
R411 1.8K
C412 1000P
C326 0.01
L204 G0C3R3JA0027
AUX_L
AUX_R
AUXMUTE
Q200 KRA102STA MUTTING SWITCH
Q223,Q423 B1ABCE000016 MUTTING SWITCH
R273 1K
Q223
R473 1K
Q423
R274 1K
Q224
R474 1K
Q424
Q224,Q424 B1ABCE000016 MUTTING SWITCH
R275 1.8K
R475 1.8K
R476 3.9K
CN309
PLUNGER
MOTOR
PGND
DECK_AD2
MO10V
DECK_AD1
+9V
PBL
PBR
DECK_A_GND
GND1
REC_L
REC_R
REC
DMT
DVREF+
DGND
9V_GND
KEY2 (TAPE_EJECT)
PHOTO
R462 10
TO G DECK CIRCUIT (CN1305) ON SCHEMATIC DIAGRAM-10
DECK_AD2
MO10V
DECK_AD1
+9V
PBL
PBR
REC_L
REC_R
REC
DMT
DVREF+
KEY2 (TAPE_EJECT)
PHOTO
AUX_L
AUX_R
CD_R
CD_L
WA116
R421 12K
C417 1000P
R221 12K
C217 1000P
WA115
R424 3.9K
R420 2.7K
R422 1K
Q422
Q222,Q422 B1ABCE000016 MUTTING SWITCH
R220 2.7K
R222 1K
Q222
WA212
Q309 KRC101STA PLUNGER SWITCH
PLUNGER
Q310 KRC101STA MOTOR SWITCH
MOTOR
TUN_L
TUN_R
WB203
PBL
WA214
R214 10K
C214 220P
R414 10K
C414 220P
PBR
WA414
L600 J0JBC0000019
L602 G0C100JA0030
C604 0.022
C605 0.022
L601 J0JBC0000019
HP_R
HP_L
HP_GND
HP_SW
C603 0.001
C619 0.1
JK600 HEADPHONE
Q400 KRA102STA MUTTING SWITCH
TMUTE

# SCHEMATIC DIAGRAM-4

## B MAIN CIRCUIT

⇨ : MAIN SIGNAL LINE
➡ : FM/AM SIGNAL LINE
▨ : TAPE PLAYBACK SIGNAL LINE
▨ : TAPE RECORD SIGNAL LINE
▦ : CD SIGNAL LINE
—— : +B SIGNAL LINE

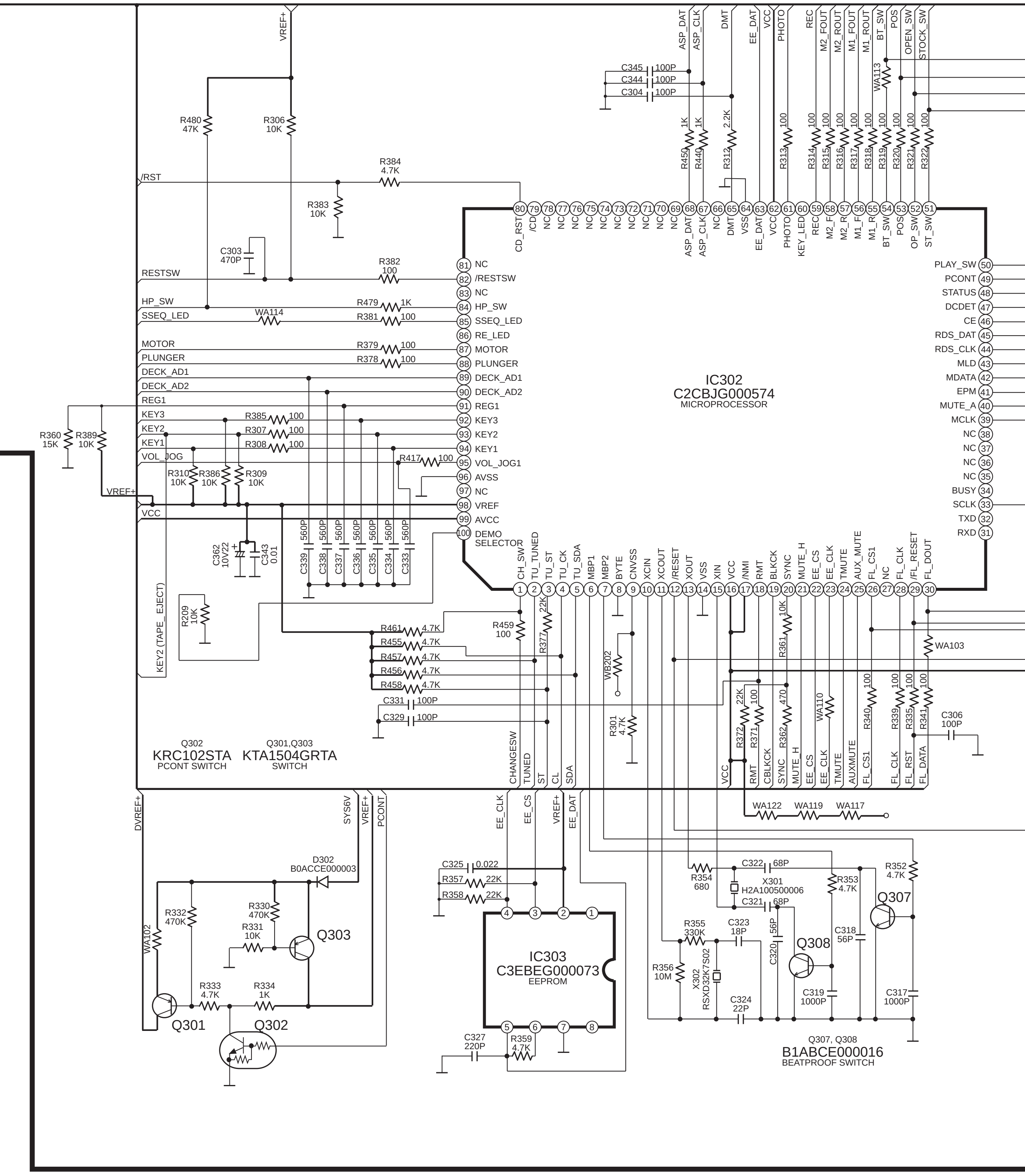


IC300
C1BB00000757
ASP IC
1 VIN1
2 VIN2
3 SEL2OUT
4 SEL1OUT
5 A1IN
6 A2IN
7 B1IN
8 B2IN
9 C1IN
10 C2IN
11 FILTER
12 GND
24 DS2
23 INF1
22 INF2
21 BNF2
20 BOUT2
19 BNF1
18 BOUT1
17 OUT1
16 OUT2
15 VCC
14 S1
13 SC
C224 16V10
C424 16V10
C220 16V10
C420 16V10
C219 16V10
C419 16V10
C222 16V10
C422 16V10
C234 25V47
C372 50V2.2
C270 820P
C470 820P
C471 0.27
C472 0.27
R471 390K
R472 2.7K
C271 0.27
C272 0.27
R271 390K
R272 2.7K
C445 180P
C245 180P
C363 100P
C364 100P
C373 470
C374 470
R374 1.2K
R375 4.7
R373 1.2K
C358 16V220
C367 0.1
R276 3.9K
R218 3.9K
R418 3.9K
R219 390
R419 390
R224 3.9K
R_OUT
L_OUT
+9V
REC_L
REC_R
ASP_DAT
ASP_CLK
IC304
C1BB00000715
RDS IC
16 RDS-ID/RE
15 RDCL
14 RDDA
13 RST
12 MODE
11 VDDD
10 VSSD
9 XIN
1 VREF
2 MPXIN
3 VDDA
4 VSSA
5 FLOUT
6 CIM
7 TEST
8 XOUT
RDS_DATA
RDS_CLK
C350 100P
C351 100P
R303 1K
R302 1K
R304 100K
C349 6.3V47
C348 1000P
C347 0.01
L302 100uH
C346 47P
X300 H0H433400001
C354 50V10
C353 330P
C352 50V10
C356 560P
C355 47P
L303 100uH
R305 1K
DET
SW5V
CN308
17 SSEQ_LED
16 SW5V
15 SYNC
14 GND2
13 RMT
12 FL_DATA
11 FL_CS
10 FL_CLK
9 FL_RST
8 PCONT
7 VREF+
6 SYS6V
5 +9V
4 KEY3
3 (TAPE EJECT) KEY2
2 KEY1
1 VOL_JOG
KEY2 (TAPE EJECT)
WA106
C368 0.1
TO C MAIN CONTROL CIRCUIT (CN606) ON SCHEMATIC DIAGRAM-8
C449 1000P
C249 1000P
JK302 SPEAKER JACK BLUE/HOAR
4 R_GND
3 HI_R
2 L_GND
1 HI_L
JK301 SPEAKER JACK RED/BLACK
4 LO_R
3 R_GND
2 LO_L
1 L_GND
R432 10
C441 0.1
C439 6800P
C437 0.1
R230 10
C241 0.1
C236 0.1
R231 10
C240 0.1
C237 0.1
C238 0.0068
C239 0.0068
C438 6800P
R431 10
C440 0.1
C436 0.1
L200,L201,L400,L401
G0AR76Y00002
L400 0.7uH
R430 10
L200 0.7uH
R228 10
L201 0.7uH
R229 10
L401 0.7uH
R429 10
CN304
1 LO_R
2 LEFT GND
3 LEFT GND
4 HI_L
5 LO_L
6 RIGHT GND
7 RIGHT GND
8 HI_R
TO J POWER CIRCUIT (CN504) ON SCHEMATIC DIAGRAM-13

# SCHEMATIC DIAGRAM-5

## B MAIN CIRCUIT

: +B SIGNAL LINE



VREF+
ASP_DAT
ASP_CLK
DMT
EE_DAT
VCC
PHOTO
REC
M2_FOUT
M2_ROUT
M1_FOUT
M1_ROUT
BT_SW
POS
OPEN_SW
STOCK_SW
C345 100P
C344 100P
C304 100P
WA113
R480 47K
R306 10K
R450 1K
R449 1K
R312 2.2K
R313 100
R314 100
R315 100
R316 100
R317 100
R319 100
R320 100
R321 100
R322 100
/RST
R384 4.7K
R383 10K
C303 470P
RESTSW
R382 100
HP_SW
R479 1K
SSEQ_LED
WA114
R381 100
MOTOR
R379 100
PLUNGER
R378 100
DECK_AD1
DECK_AD2
REG1
KEY3
R385 100
KEY2
R307 100
KEY1
R308 100
VOL_JOG
R417 100
R360 15K
R389 10K
R310 10K
R386 10K
R309 10K
VREF+
VCC
C362 10V22
C343 0.01
C339 560P
C338 560P
C337 560P
C336 560P
C335 560P
C334 560P
C333 560P
KEY2 (TAPE_EJECT)
R209 10K
80 CD_RST
79 /CD
78 NC
77 NC
76 NC
75 NC
74 NC
73 NC
72 NC
71 NC
70 NC
69 NC
68 ASP_DAT
67 ASP_CLK
66 NC
65 DMT
64 VSS
63 EE_DAT
62 VCC
61 PHOTO
60 KEY_LED
59 REC
58 M2_F
57 M2_R
56 M1_F
55 M1_R
54 BT_SW
53 POS
52 OP_SW
51 ST_SW
81 NC
82 /RESTSW
83 NC
84 HP_SW
85 SSEQ_LED
86 RE_LED
87 MOTOR
88 PLUNGER
89 DECK_AD1
90 DECK_AD2
91 REG1
92 KEY3
93 KEY2
94 KEY1
95 VOL_JOG1
96 AVSS
97 NC
98 VREF
99 AVCC
100 DEMO SELECTOR
PLAY_SW 50
PCONT 49
STATUS 48
DCDET 47
CE 46
RDS_DAT 45
RDS_CLK 44
MLD 43
MDATA 42
EPM 41
MUTE_A 40
MCLK 39
NC 38
NC 37
NC 36
NC 35
BUSY 34
SCLK 33
TXD 32
RXD 31
IC302
C2CBJG000574
MICROPROCESSOR
1 CH_SW
2 TU_TUNED
3 TU_ST
4 TU_CK
5 TU_SDA
6 MBP1
7 MBP2
8 BYTE
9 CNVSS
10 XCIN
11 XCOUT
12 /RESET
13 XOUT
14 VSS
15 XIN
16 VCC
17 /NMI
18 RMT
19 BLKCK
20 SYNC
21 MUTE_H
22 EE_CS
23 EE_CLK
24 TMUTE
25 AUX_MUTE
26 FL_CS1
27 NC
28 FL_CLK
29 /FL_RESET
30 FL_DOUT
R461 4.7K
R455 4.7K
R457 4.7K
R456 4.7K
R458 4.7K
C331 100P
C329 100P
R459 100
R377 22K
WB202
R301 4.7K
R361 10K
R372 22K
R371 100
R362 470
WA110
R340 100
R339 100
R335 100
R341 100
WA103
C306 100P
Q302
KRC102STA
PCONT SWITCH
Q301,Q303
KTA1504GRTA
SWITCH
CHANGESW
TUNED
ST
CL
SDA
VCC
RMT
CBLKCK
SYNC
MUTE_H
EE_CS
EE_CLK
TMUTE
AUXMUTE
FL_CS1
FL_CLK
FL_RST
FL_DATA
WA122
WA119
WA117
DVREF+
SYS6V
VREF+
PCONT
D302
B0ACCE000003
WA102
R332 470K
R330 470K
R331 10K
Q303
R333 4.7K
R334 1K
Q301
Q302
EE_CLK
EE_CS
VREF+
EE_DAT
C325 0.022
R357 22K
R358 22K
IC303
C3EBEG000073
EEPROM
C327 220P
R359 4.7K
R354 680
C322 68P
X301
H2A100500006
C321 68P
R353 4.7K
R352 4.7K
Q307
R355 330K
C323 18P
C320 56P
Q308
C318 56P
R356 10M
X302
RSXD32K7S02
C324 22P
C319 1000P
C317 1000P
Q307, Q308
B1ABCE000016
BEATPROOF SWITCH

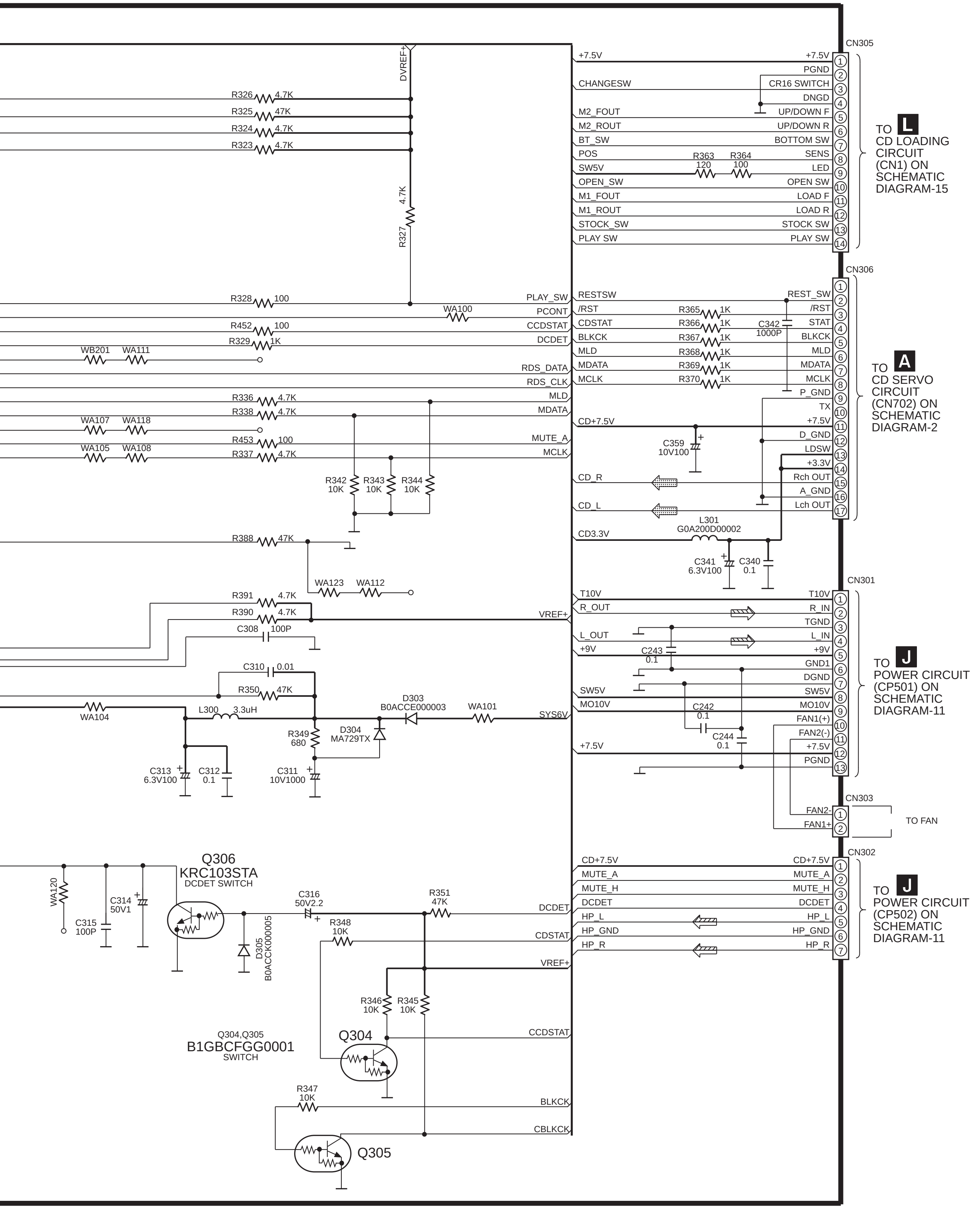
# SCHEMATIC DIAGRAM-6

## B MAIN CIRCUIT

: +B SIGNAL LINE

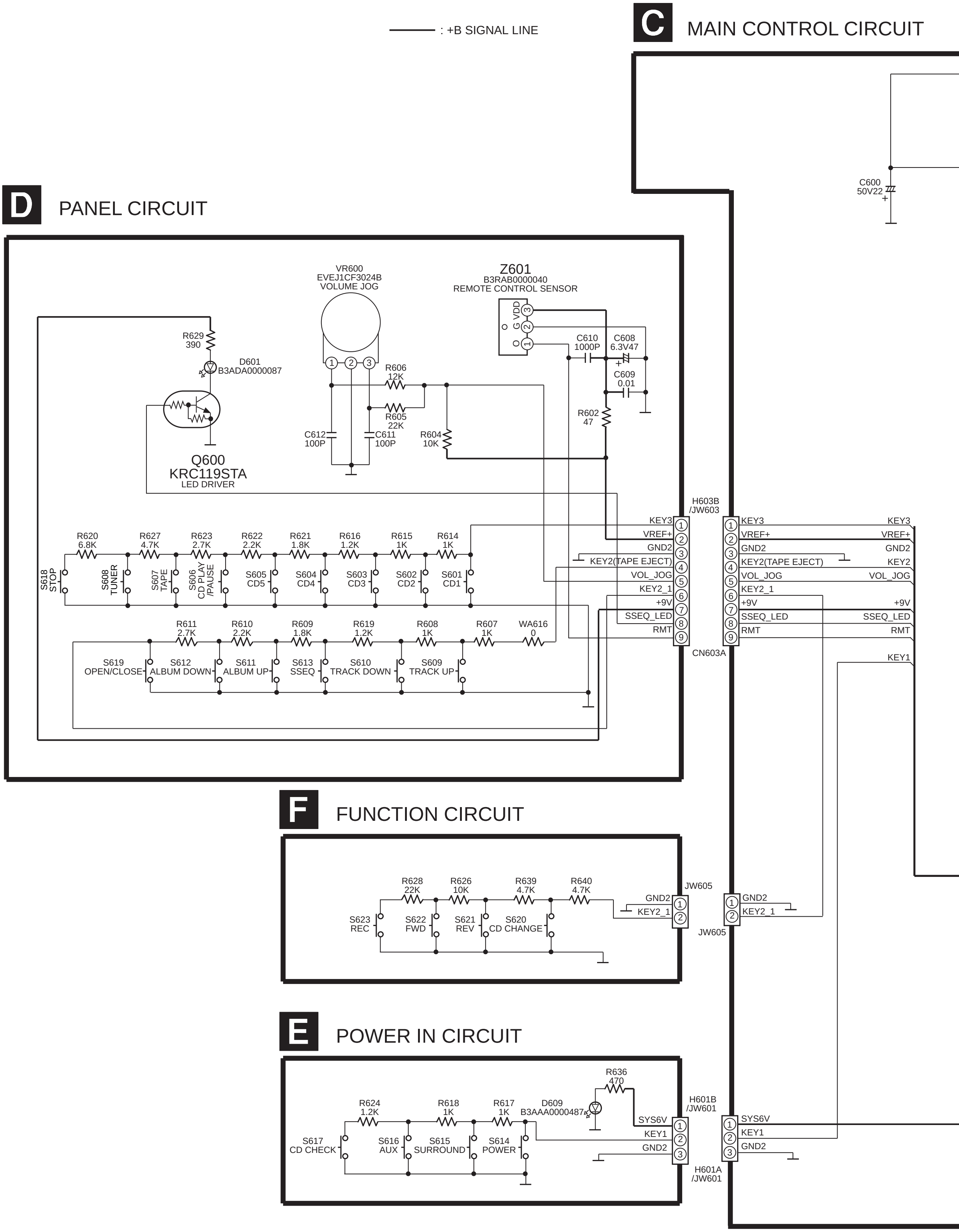
: MAIN SIGNAL LINE

: CD SIGNAL LINE


DVREF+
R326 4.7K
R325 47K
R324 4.7K
R323 4.7K
R327 4.7K
R328 100
PLAY_SW
WA100
PCONT
R452 100
CCDSTAT
R329 1K
DCDET
WB201 WA111
RDS_DATA
RDS_CLK
R336 4.7K
MLD
R338 4.7K
MDATA
WA107 WA118
R453 100
MUTE_A
WA105 WA108
R337 4.7K
MCLK
R342 10K
R343 10K
R344 10K
R388 47K
WA123 WA112
R391 4.7K
R390 4.7K
VREF+
C308 100P
C310 0.01
R350 47K
WA104
L300 3.3uH
D303 B0ACCE000003
WA101
SYS6V
R349 680
D304 MA729TX
C313 6.3V100
C312 0.1
C311 10V1000
Q306 KRC103STA DCDET SWITCH
WA120
C314 50V1
C315 100P
C316 50V2.2
D305 B0ACCK000005
R351 47K
DCDET
R348 10K
CDSTAT
VREF+
R346 10K
R345 10K
CCDSTAT
Q304,Q305 B1GBCFGG0001 SWITCH
Q304
R347 10K
BLKCK
CBLKCK
Q305
CN305
+7.5V
CHANGESW
M2_FOUT
M2_ROUT
BT_SW
POS
SW5V
OPEN_SW
M1_FOUT
M1_ROUT
STOCK_SW
PLAY SW
R363 120
R364 100
+7.5V ①
PGND ②
CR16 SWITCH ③
DNGD ④
UP/DOWN F ⑤
UP/DOWN R ⑥
BOTTOM SW ⑦
SENS ⑧
LED ⑨
OPEN SW ⑩
LOAD F ⑪
LOAD R ⑫
STOCK SW ⑬
PLAY SW ⑭
TO L CD LOADING CIRCUIT (CN1) ON SCHEMATIC DIAGRAM-15
CN306
RESTSW
/RST
CDSTAT
BLKCK
MLD
MDATA
MCLK
R365 1K
R366 1K
R367 1K
R368 1K
R369 1K
R370 1K
C342 1000P
REST_SW ①
/RST ②
STAT ③
BLKCK ④
MLD ⑤
MDATA ⑥
MCLK ⑦
P_GND ⑧
TX ⑨
+7.5V ⑩
D_GND ⑪
LDSW ⑫
+3.3V ⑬
Rch OUT ⑭
A_GND ⑮
Lch OUT ⑯
⑰
CD+7.5V
C359 10V100
CD_R
CD_L
CD3.3V
L301 G0A200D00002
C341 6.3V100
C340 0.1
TO A CD SERVO CIRCUIT (CN702) ON SCHEMATIC DIAGRAM-2
CN301
T10V
R_OUT
L_OUT
+9V
C243 0.1
SW5V
MO10V
C242 0.1
C244 0.1
+7.5V
T10V ①
R_IN ②
TGND ③
L_IN ④
+9V ⑤
GND1 ⑥
DGND ⑦
SW5V ⑧
MO10V ⑨
FAN1(+) ⑩
FAN2(-) ⑪
+7.5V ⑫
PGND ⑬
TO J POWER CIRCUIT (CP501) ON SCHEMATIC DIAGRAM-11
CN303
FAN2- ①
FAN1+ ②
TO FAN
CN302
CD+7.5V
MUTE_A
MUTE_H
DCDET
HP_L
HP_GND
HP_R
CD+7.5V ①
MUTE_A ②
MUTE_H ③
DCDET ④
HP_L ⑤
HP_GND ⑥
HP_R ⑦
TO J POWER CIRCUIT (CP502) ON SCHEMATIC DIAGRAM-11

# SCHEMATIC DIAGRAM-7

: +B SIGNAL LINE

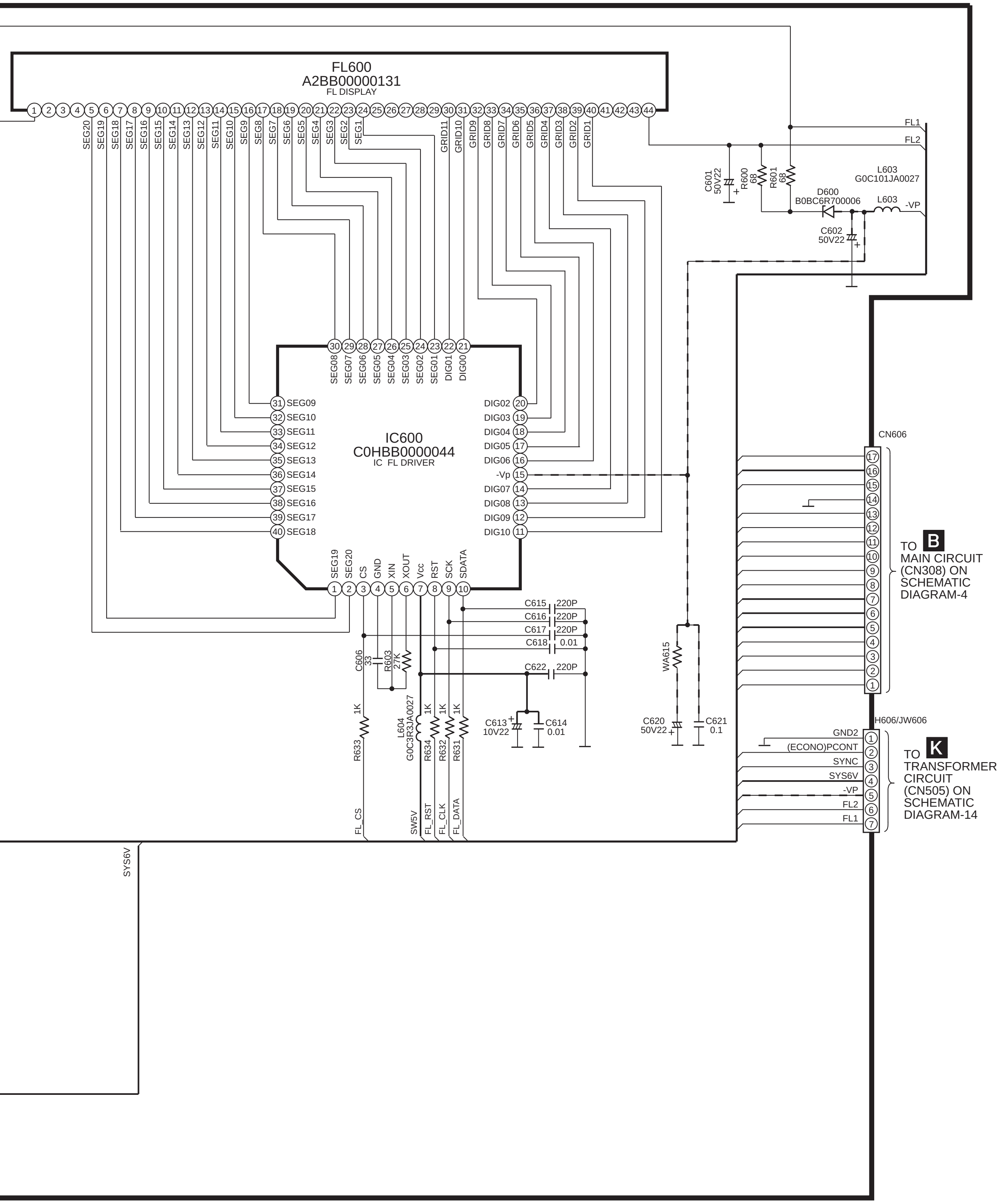

C
MAIN CONTROL CIRCUIT
C600
50V22
D
PANEL CIRCUIT
VR600
EVEJ1CF3024B
VOLUME JOG
Z601
B3RAB0000040
REMOTE CONTROL SENSOR
O G VDD
R629
390
D601
B3ADA0000087
R606
12K
R605
22K
C610
1000P
C608
6.3V47
C609
0.01
R602
47
C612
100P
C611
100P
R604
10K
Q600
KRC119STA
LED DRIVER
H603B
/JW603
KEY3
VREF+
GND2
KEY2(TAPE EJECT)
VOL_JOG
KEY2_1
+9V
SSEQ_LED
RMT
CN603A
KEY2
KEY1
R620
6.8K
R627
4.7K
R623
2.7K
R622
2.2K
R621
1.8K
R616
1.2K
R615
1K
R614
1K
S618
STOP
S608
TUNER
S607
TAPE
S606
CD PLAY
/PAUSE
S605
CD5
S604
CD4
S603
CD3
S602
CD2
S601
CD1
R611
2.7K
R610
2.2K
R609
1.8K
R619
1.2K
R608
1K
R607
1K
WA616
0
S619
OPEN/CLOSE
S612
ALBUM DOWN
S611
ALBUM UP
S613
SSEQ
S610
TRACK DOWN
S609
TRACK UP
F
FUNCTION CIRCUIT
R628
22K
R626
10K
R639
4.7K
R640
4.7K
JW605
GND2
KEY2_1
S623
REC
S622
FWD
S621
REV
S620
CD CHANGE
JW605
E
POWER IN CIRCUIT
R636
470
R624
1.2K
R618
1K
R617
1K
D609
B3AAA0000487
H601B
/JW601
SYS6V
KEY1
GND2
S617
CD CHECK
S616
AUX
S615
SURROUND
S614
POWER
H601A
/JW601

# SCHEMATIC DIAGRAM-8

## C MAIN CONTROL CIRCUIT

- - - : +B SIGNAL LINE

—— : +B SIGNAL LINE


FL600
A2BB00000131
FL DISPLAY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44
SEG20
SEG19
SEG18
SEG17
SEG16
SEG15
SEG14
SEG13
SEG12
SEG11
SEG10
SEG9
SEG8
SEG7
SEG6
SEG5
SEG4
SEG3
SEG2
SEG1
GRID11
GRID10
GRID9
GRID8
GRID7
GRID6
GRID5
GRID4
GRID3
GRID2
GRID1
FL1
FL2
C601
50V22
R600
68
R601
68
L603
G0C101JA0027
D600
B0BC6R700006
L603
-VP
C602
50V22
IC600
C0HBB0000044
IC FL DRIVER
30 SEG08
29 SEG07
28 SEG06
27 SEG05
26 SEG04
25 SEG03
24 SEG02
23 SEG01
22 DIG01
21 DIG00
31 SEG09
32 SEG10
33 SEG11
34 SEG12
35 SEG13
36 SEG14
37 SEG15
38 SEG16
39 SEG17
40 SEG18
DIG02 20
DIG03 19
DIG04 18
DIG05 17
DIG06 16
-Vp 15
DIG07 14
DIG08 13
DIG09 12
DIG10 11
1 SEG19
2 SEG20
3 CS
4 GND
5 XIN
6 XOUT
7 Vcc
8 RST
9 SCK
10 SDATA
C615 220P
C616 220P
C617 220P
C618 0.01
C622 220P
C606
33
R603
27K
1K
R633
L604
G0C3R3JA0027
1K
R634
1K
R632
1K
R631
C613
10V22
C614
0.01
WA615
C620
50V22
C621
0.1
FL_CS
SW5V
FL_RST
FL_CLK
FL_DATA
SYS6V
CN606
17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
TO B
MAIN CIRCUIT
(CN308) ON
SCHEMATIC
DIAGRAM-4
H606/JW606
GND2 1
(ECONO)PCONT 2
SYNC 3
SYS6V 4
-VP 5
FL2 6
FL1 7
TO K
TRANSFORMER
CIRCUIT
(CN505) ON
SCHEMATIC
DIAGRAM-14

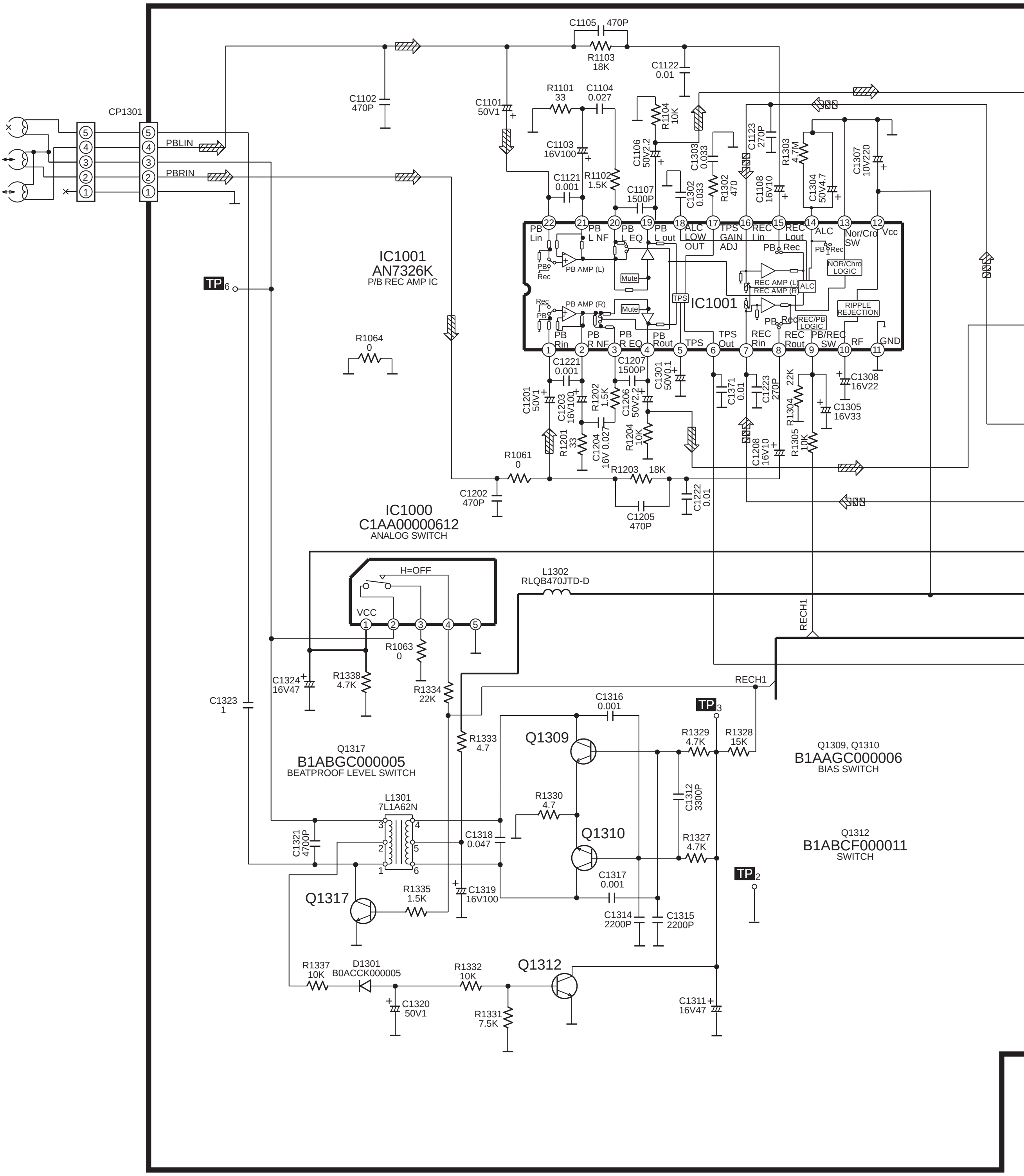
# SCHEMATIC DIAGRAM-9

## G DECK CIRCUIT

—— : +B SIGNAL LINE

▨ : TAPE PLAYBACK SIGNAL LINE

▨ : TAPE RECORD SIGNAL LINE


CP1301
PBLIN
PBRIN
C1105 470P
R1103 18K
C1122 0.01
C1102 470P
C1101 50V1
R1101 33
C1104 0.027
C1103 16V100
R1104 10K
C1106 50V2.2
C1121 0.001
R1102 1.5K
C1107 1500P
C1302 0.033
C1303 0.033
R1302 470
C1108 16V10
C1123 270P
R1303 4.7M
C1304 50V4.7
C1307 10V220
PB Lin
PB L NF
PB L EQ
PB L out
ALC LOW OUT
TPS GAIN ADJ
REC Lin
REC Lout
ALC
Nor/Cro SW
Vcc
PB AMP (L)
PB AMP (R)
Mute
TPS
IC1001
REC AMP (L)
REC AMP (R)
NOR/Chro LOGIC
RIPPLE REJECTION
REC/PB LOGIC
PB Rin
PB R NF
PB R EQ
PB Rout
TPS
TPS Out
REC Rin
REC Rout
PB/REC SW
RF
GND
IC1001
AN7326K
P/B REC AMP IC
TP6
R1064 0
C1221 0.001
C1207 1500P
C1301 50V0.1
C1201 50V1
C1203 16V100
R1202 1.5K
C1206 50V2.2
C1371 0.01
C1223 270P
R1304 22K
C1308 16V22
C1305 16V33
R1201 33
C1204 16V 0.027
R1204 10K
C1208 16V10
R1305 10K
R1061 0
C1202 470P
R1203 18K
C1222 0.01
C1205 470P
IC1000
C1AA00000612
ANALOG SWITCH
H=OFF
VCC
L1302
RLQB470JTD-D
RECH1
RECH1
R1063 0
C1324 16V47
R1338 4.7K
R1334 22K
C1323 1
C1316 0.001
TP3
R1329 4.7K
R1328 15K
R1333 4.7
Q1309
Q1309, Q1310
B1AAGC000006
BIAS SWITCH
Q1317
B1ABGC000005
BEATPROOF LEVEL SWITCH
C1312 3300P
L1301
7L1A62N
R1330 4.7
C1318 0.047
Q1310
R1327 4.7K
Q1312
B1ABCF000011
SWITCH
C1321 4700P
TP2
C1317 0.001
R1335 1.5K
C1319 16V100
Q1317
C1314 2200P
C1315 2200P
R1337 10K
D1301 B0ACCK000005
R1332 10K
Q1312
C1320 50V1
R1331 7.5K
C1311 16V47

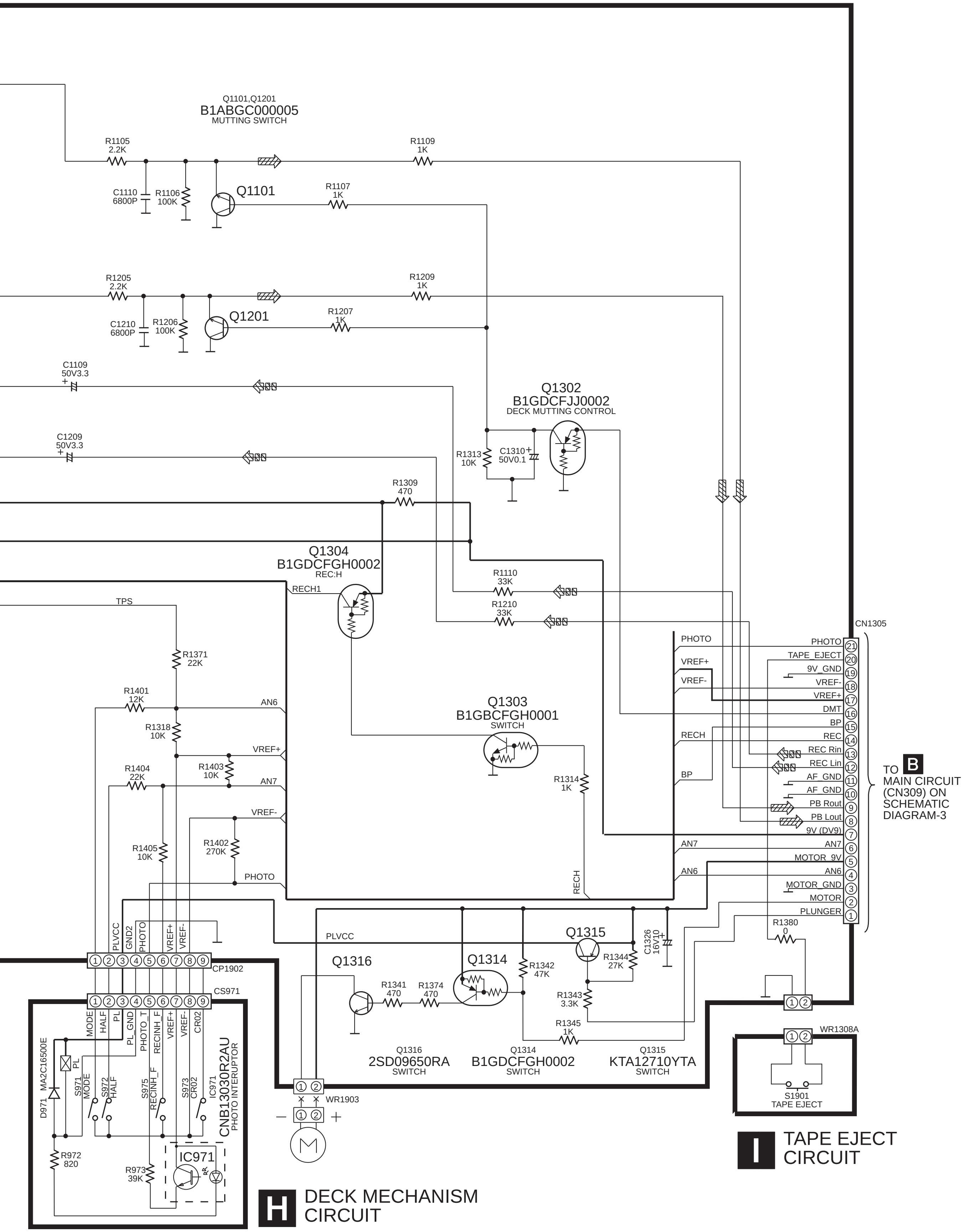
# SCHEMATIC DIAGRAM-10

## G DECK CIRCUIT

— : +B SIGNAL LINE

▨ : TAPE PLAYBACK SIGNAL LINE

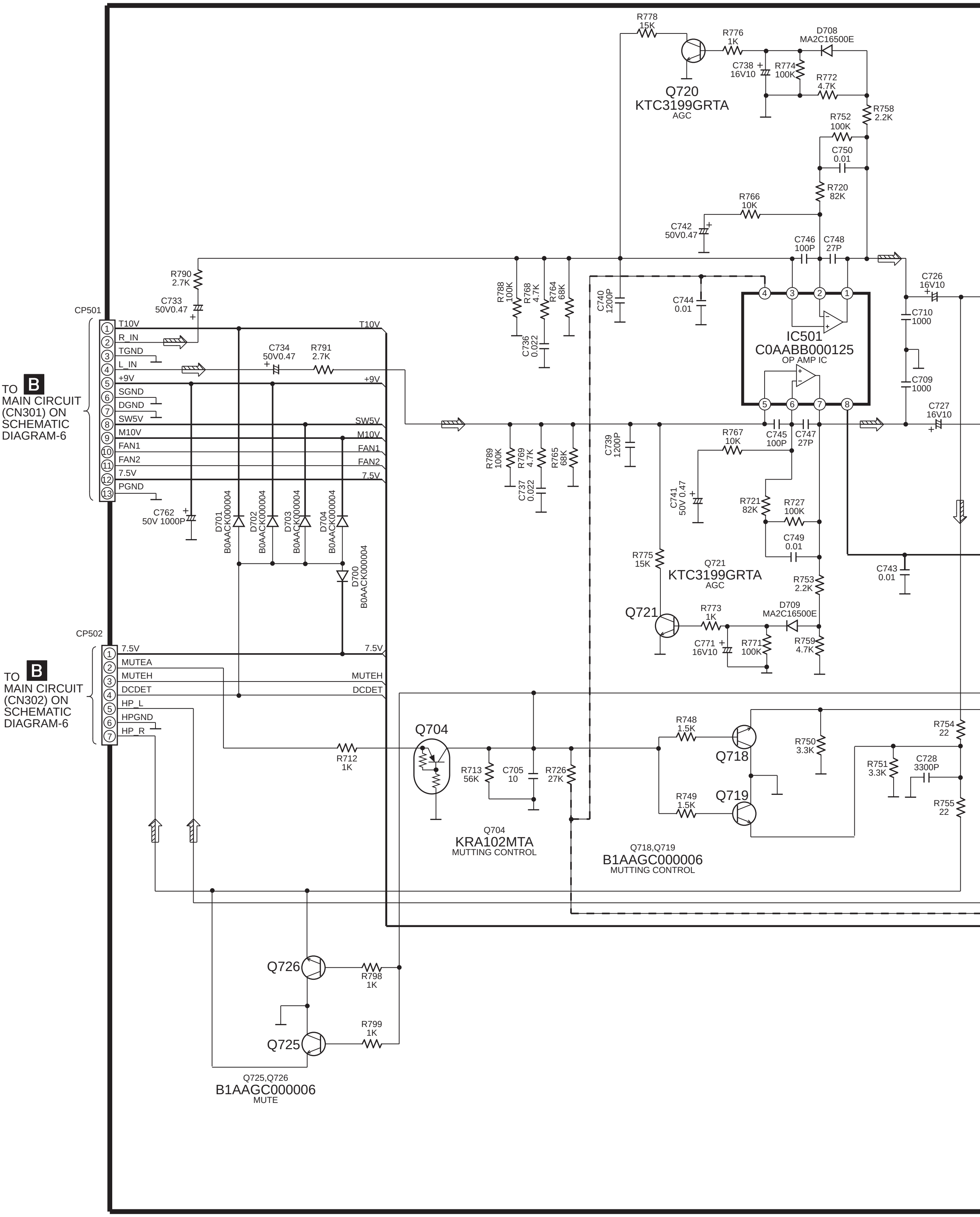
▨ : TAPE RECORD SIGNAL LINE


Q1101,Q1201
B1ABGC000005
MUTTING SWITCH
R1105
2.2K
C1110
6800P
R1106
100K
Q1101
R1109
1K
R1107
1K
R1205
2.2K
C1210
6800P
R1206
100K
Q1201
R1209
1K
R1207
1K
C1109
50V3.3
C1209
50V3.3
Q1302
B1GDCFJJ0002
DECK MUTTING CONTROL
R1313
10K
C1310
50V0.1
R1309
470
Q1304
B1GDCFGH0002
REC:H
RECH1
TPS
R1110
33K
R1210
33K
R1371
22K
R1401
12K
AN6
R1318
10K
VREF+
R1404
22K
R1403
10K
AN7
VREF-
R1405
10K
R1402
270K
PHOTO
Q1303
B1GBCFGH0001
SWITCH
R1314
1K
RECH
PHOTO
VREF+
VREF-
RECH
BP
AN7
AN6
CN1305
PHOTO 21
TAPE_EJECT 20
9V_GND 19
VREF- 18
VREF+ 17
DMT 16
BP 15
REC 14
REC Rin 13
REC Lin 12
AF_GND 11
AF_GND 10
PB Rout 9
PB Lout 8
9V (DV9) 7
AN7 6
MOTOR_9V 5
AN6 4
MOTOR_GND 3
MOTOR 2
PLUNGER 1
TO B MAIN CIRCUIT (CN309) ON SCHEMATIC DIAGRAM-3
R1380
0
PLVCC
GND2
PHOTO
VREF+
VREF-
PLVCC
CP1902
CS971
Q1316
Q1314
Q1315
R1341
470
R1374
470
R1342
47K
R1344
27K
C1326
16V10
R1343
3.3K
R1345
1K
Q1316
2SD09650RA
SWITCH
Q1314
B1GDCFGH0002
SWITCH
Q1315
KTA12710YTA
SWITCH
WR1903
M
WR1308A
S1901
TAPE EJECT
I TAPE EJECT CIRCUIT
MODE
HALF
PL
PL_GND
PHOTO_T
RECINH_F
VREF+
VREF-
CR02
D971 MA2C16500E
PL
S971 MODE
S972 HALF
S975 RECINH_F
S973 CR02
IC971
CNB13030R2AU
PHOTO INTERUPTOR
R972
820
R973
39K
IC971
H DECK MECHANISM CIRCUIT

## SCHEMATIC DIAGRAM-11

## J POWER CIRCUIT

- - - : -B SIGNAL LINE
——— : +B SIGNAL LINE
⇨ : MAIN SIGNAL LINE


R778 15K
Q720 KTC3199GRTA AGC
R776 1K
D708 MA2C16500E
C738 16V10
R774 100K
R772 4.7K
R758 2.2K
R752 100K
C750 0.01
R720 82K
R766 10K
C742 50V0.47
C746 100P
C748 27P
R790 2.7K
C733 50V0.47
CP501
T10V
R_IN
TGND
L_IN
+9V
SGND
DGND
SW5V
M10V
FAN1
FAN2
7.5V
PGND
TO B MAIN CIRCUIT (CN301) ON SCHEMATIC DIAGRAM-6
C734 50V0.47
R791 2.7K
R788 100K
R768 4.7K
R764 68K
C736 0.022
C740 1200P
C744 0.01
IC501 C0AABB000125 OP AMP IC
C726 16V10
C710 1000
C709 1000
C727 16V10
R789 100K
R769 4.7K
R765 68K
C737 0.022
C739 1200P
R767 10K
C745 100P
C747 27P
C741 50V 0.47
R721 82K
R727 100K
C749 0.01
C743 0.01
R775 15K
Q721 KTC3199GRTA AGC
R753 2.2K
R773 1K
D709 MA2C16500E
C771 16V10
R771 100K
R759 4.7K
C762 50V 1000P
D701 B0AACK000004
D702 B0AACK000004
D703 B0AACK000004
D704 B0AACK000004
D700 B0AACK000004
CP502
MUTEA
MUTEH
DCDET
HP_L
HPGND
HP_R
TO B MAIN CIRCUIT (CN302) ON SCHEMATIC DIAGRAM-6
Q704
R712 1K
R713 56K
C705 10
R726 27K
Q704 KRA102MTA MUTTING CONTROL
R748 1.5K
R749 1.5K
Q718
Q719
R750 3.3K
R754 22
R751 3.3K
C728 3300P
R755 22
Q718,Q719 B1AAGC000006 MUTTING CONTROL
Q726
R798 1K
R799 1K
Q725
Q725,Q726 B1AAGC000006 MUTE

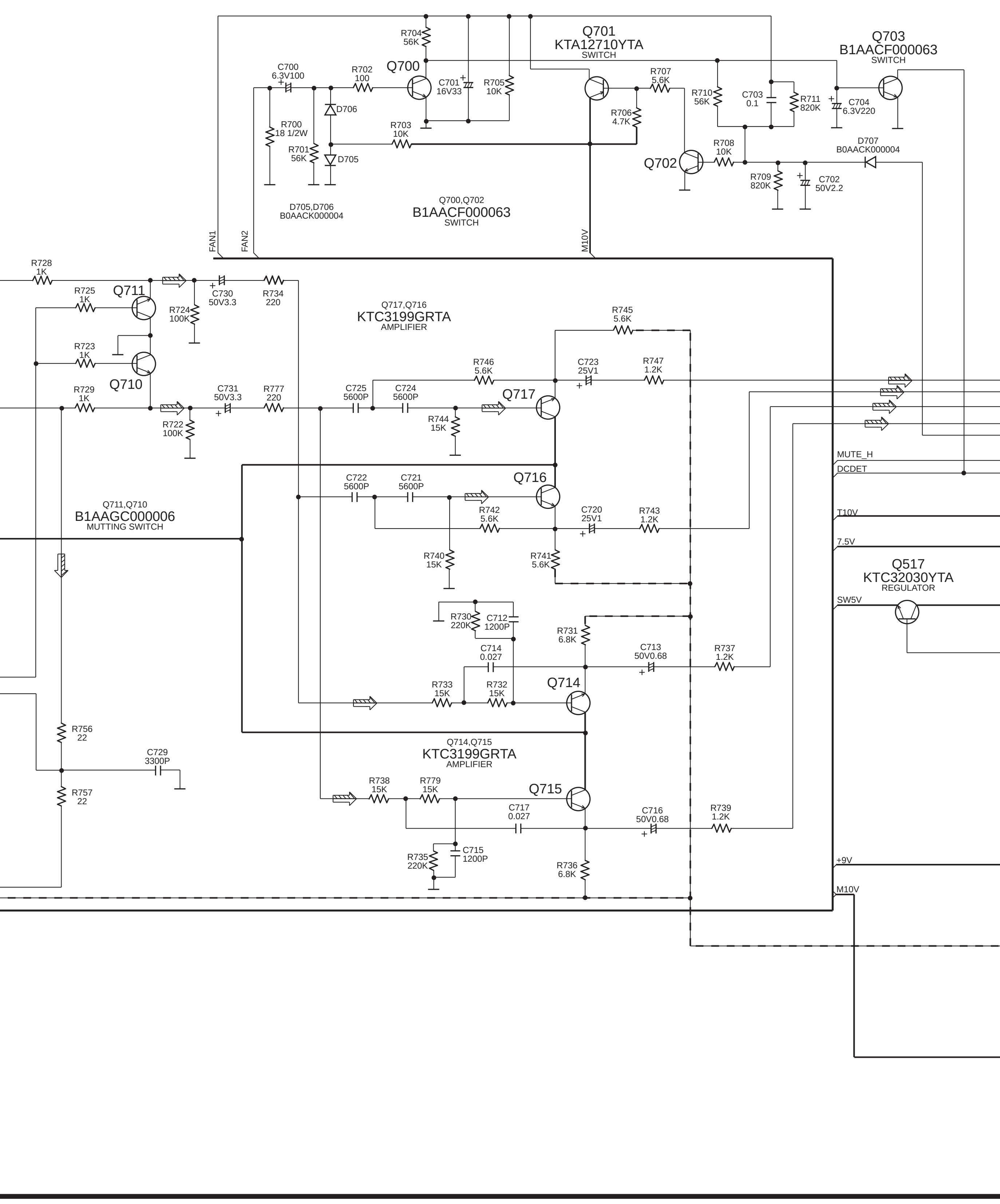
# SCHEMATIC DIAGRAM-12

## J POWER CIRCUIT

- - - : -B SIGNAL LINE

——— : +B SIGNAL LINE

⇨ : MAIN SIGNAL LINE


R704 56K
Q701
KTA12710YTA
SWITCH
Q703
B1AACF000063
SWITCH
C700 6.3V100
R702 100
Q700
C701 16V33
R705 10K
R707 5.6K
R710 56K
C703 0.1
R711 820K
C704 6.3V220
D706
R700 18 1/2W
R703 10K
R706 4.7K
D707 B0AACK000004
R701 56K
D705
R708 10K
Q702
R709 820K
C702 50V2.2
Q700,Q702
B1AACF000063
SWITCH
D705,D706
B0AACK000004
FAN1
FAN2
M10V
R728 1K
R725 1K
Q711
C730 50V3.3
R734 220
R724 100K
Q717,Q716
KTC3199GRTA
AMPLIFIER
R745 5.6K
R723 1K
Q710
R746 5.6K
C723 25V1
R747 1.2K
R729 1K
C731 50V3.3
R777 220
C725 5600P
C724 5600P
Q717
R744 15K
R722 100K
MUTE_H
DCDET
C722 5600P
C721 5600P
Q716
Q711,Q710
B1AAGC000006
MUTTING SWITCH
R742 5.6K
C720 25V1
R743 1.2K
T10V
7.5V
R740 15K
R741 5.6K
Q517
KTC32030YTA
REGULATOR
SW5V
R730 220K
C712 1200P
R731 6.8K
C714 0.027
C713 50V0.68
R737 1.2K
R733 15K
R732 15K
Q714
R756 22
Q714,Q715
KTC3199GRTA
AMPLIFIER
C729 3300P
R738 15K
R779 15K
Q715
R757 22
C717 0.027
C716 50V0.68
R739 1.2K
R735 220K
C715 1200P
R736 6.8K
+9V
M10V

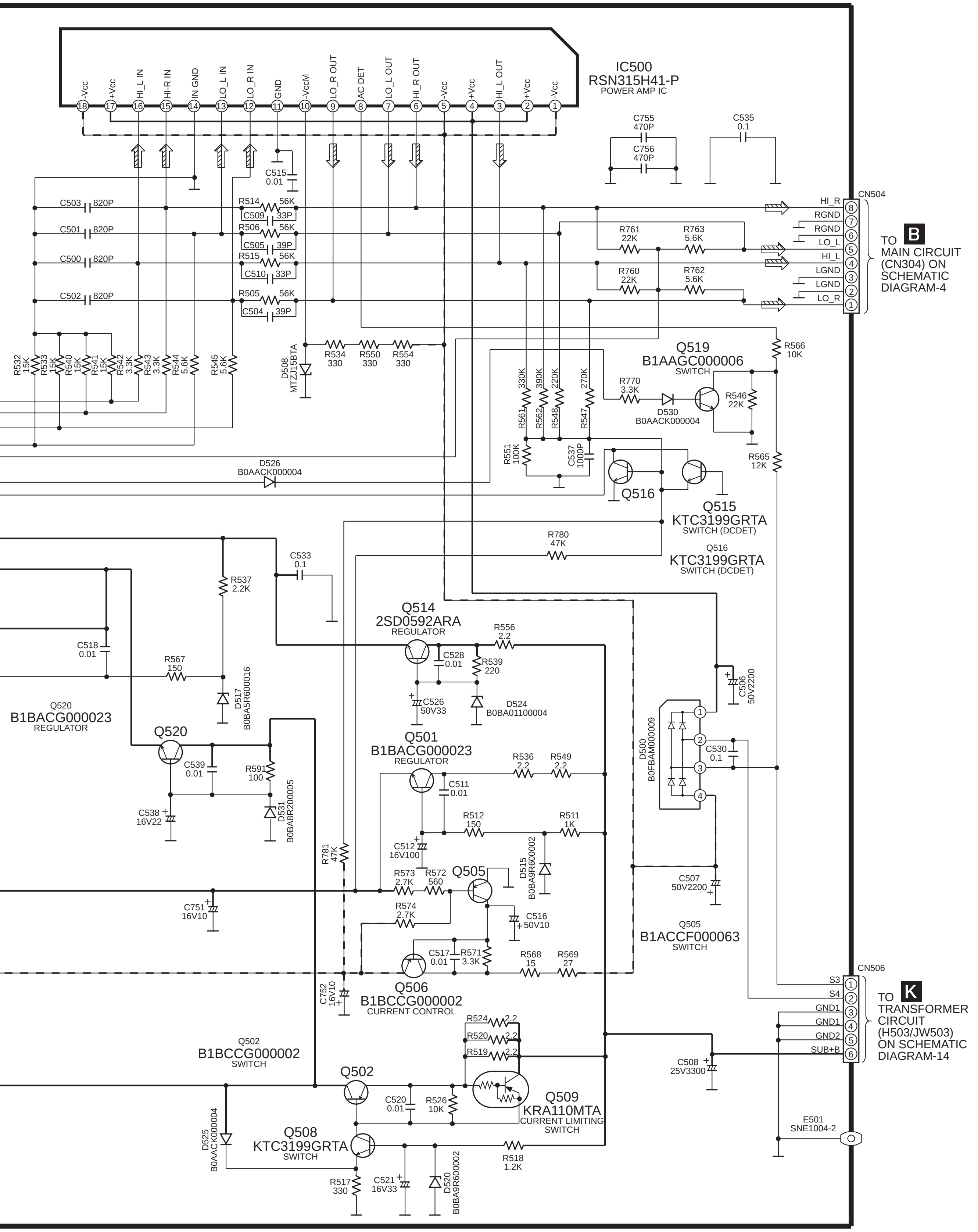
# SCHEMATIC DIAGRAM-13

## **J** POWER CIRCUIT

- - - - : -B SIGNAL LINE

——— : +B SIGNAL LINE

⇨ : MAIN SIGNAL LINE


IC500
RSN315H41-P
POWER AMP IC
18 -Vcc
17 +Vcc
16 HI_L IN
15 HI-R IN
14 IN GND
13 LO_L IN
12 LO_R IN
11 GND
10 -VccM
9 LO_R OUT
8 AC DET
7 LO_L OUT
6 HI_R OUT
5 -Vcc
4 +Vcc
3 HI_L OUT
2 +Vcc
1 -Vcc
C755 470P
C756 470P
C535 0.1
C515 0.01
C503 820P
C501 820P
C500 820P
C502 820P
R514 56K
C509 33P
R506 56K
C505 39P
R515 56K
C510 33P
R505 56K
C504 39P
R761 22K
R763 5.6K
R760 22K
R762 5.6K
CN504
HI_R 8
RGND 7
RGND 6
LO_L 5
HI_L 4
LGND 3
LGND 2
LO_R 1
TO B MAIN CIRCUIT (CN304) ON SCHEMATIC DIAGRAM-4
R532 15K
R533 15K
R540 15K
R541 15K
R542 15K
R543 3.3K
R544 3.3K
R545 5.6K
5.6K
D508 MTZJ15BTA
R534 330
R550 330
R554 330
Q519
B1AAGC000006
SWITCH
R566 10K
R561 330K
R562 390K
R548 220K
R547 270K
R770 3.3K
D530 B0AACK000004
R546 22K
R565 12K
R551 100K
C537 1000P
D526 B0AACK000004
Q516
Q515
KTC3199GRTA
SWITCH (DCDET)
Q516
KTC3199GRTA
SWITCH (DCDET)
R780 47K
C533 0.1
R537 2.2K
C518 0.01
R567 150
D517 B0BA5R600016
Q520
B1BACG000023
REGULATOR
Q520
C539 0.01
R591 100
C538 16V22
D531 B0BA8R200005
Q514
2SD0592ARA
REGULATOR
R556 2.2
C528 0.01
R539 220
C526 50V33
D524 B0BA01100004
C506 50V2200
D500 B0FBAM000009
C530 0.1
Q501
B1BACG000023
REGULATOR
R536 2.2
R549 2.2
C511 0.01
R512 150
R511 1K
C512 16V100
D515 B0BA9R600002
R781 47K
R573 2.7K
R572 560
Q505
R574 2.7K
C516 50V10
C751 16V10
C507 50V2200
Q505
B1ACCF000063
SWITCH
C517 0.01
R571 3.3K
R568 15
R569 27
Q506
B1BCCG000002
CURRENT CONTROL
C752 16V10
CN506
S3 1
S4 2
GND1 3
GND1 4
GND2 5
SUB+B 6
TO K TRANSFORMER CIRCUIT (H503/JW503) ON SCHEMATIC DIAGRAM-14
R524 2.2
R520 2.2
R519 2.2
Q502
B1BCCG000002
SWITCH
Q502
C520 0.01
R526 10K
Q509
KRA110MTA
CURRENT LIMITING SWITCH
C508 25V3300
E501 SNE1004-2
D525 B0AACK000004
Q508
KTC3199GRTA
SWITCH
R518 1.2K
R517 330
C521 16V33
D520 B0BA9R600002

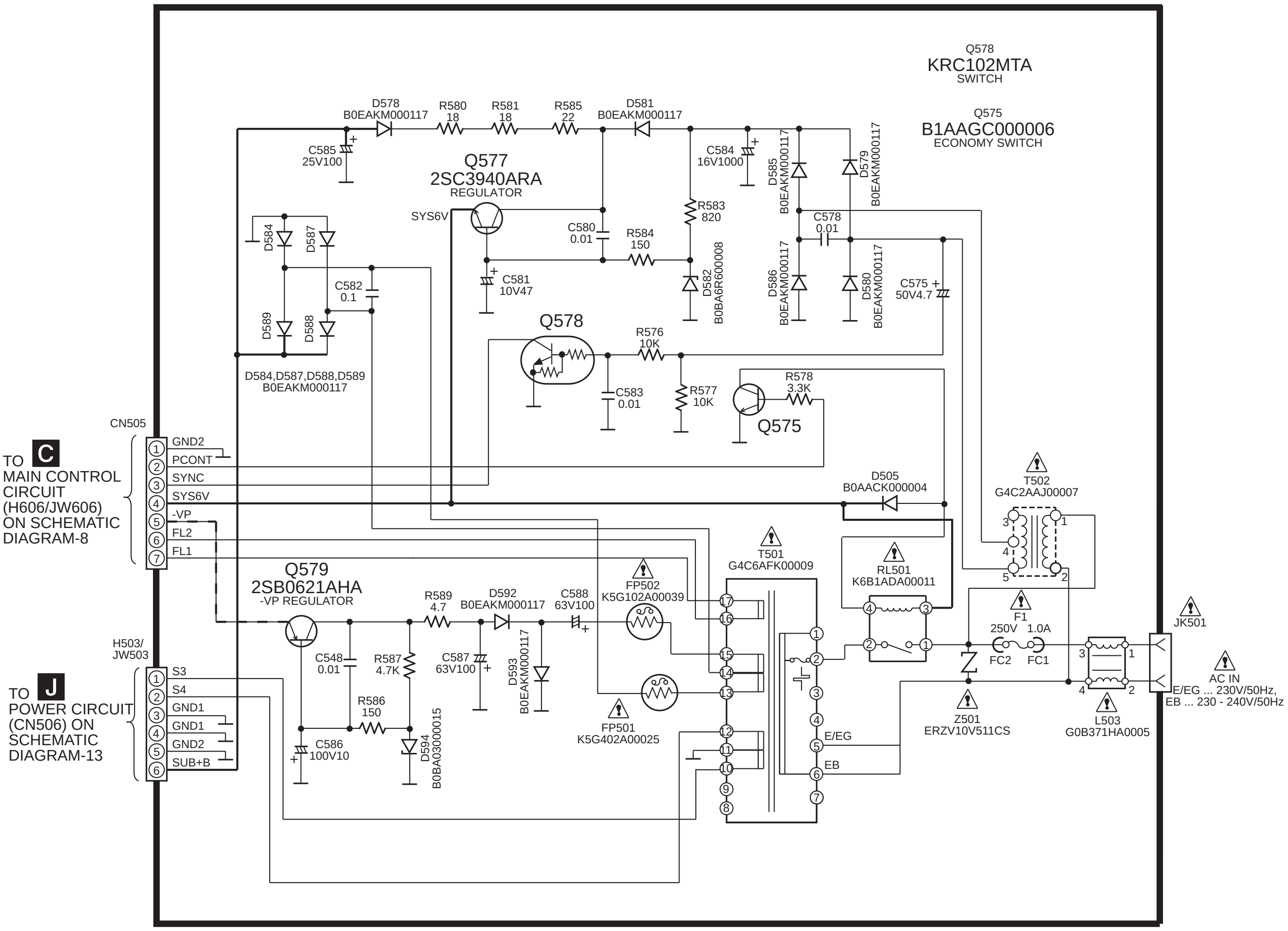
# SCHEMATIC DIAGRAM-14

**K** (E/EG) (EB)

# TRANSFORMER CIRCUIT

- - - : -B SIGNAL LINE

——— : +B SIGNAL LINE

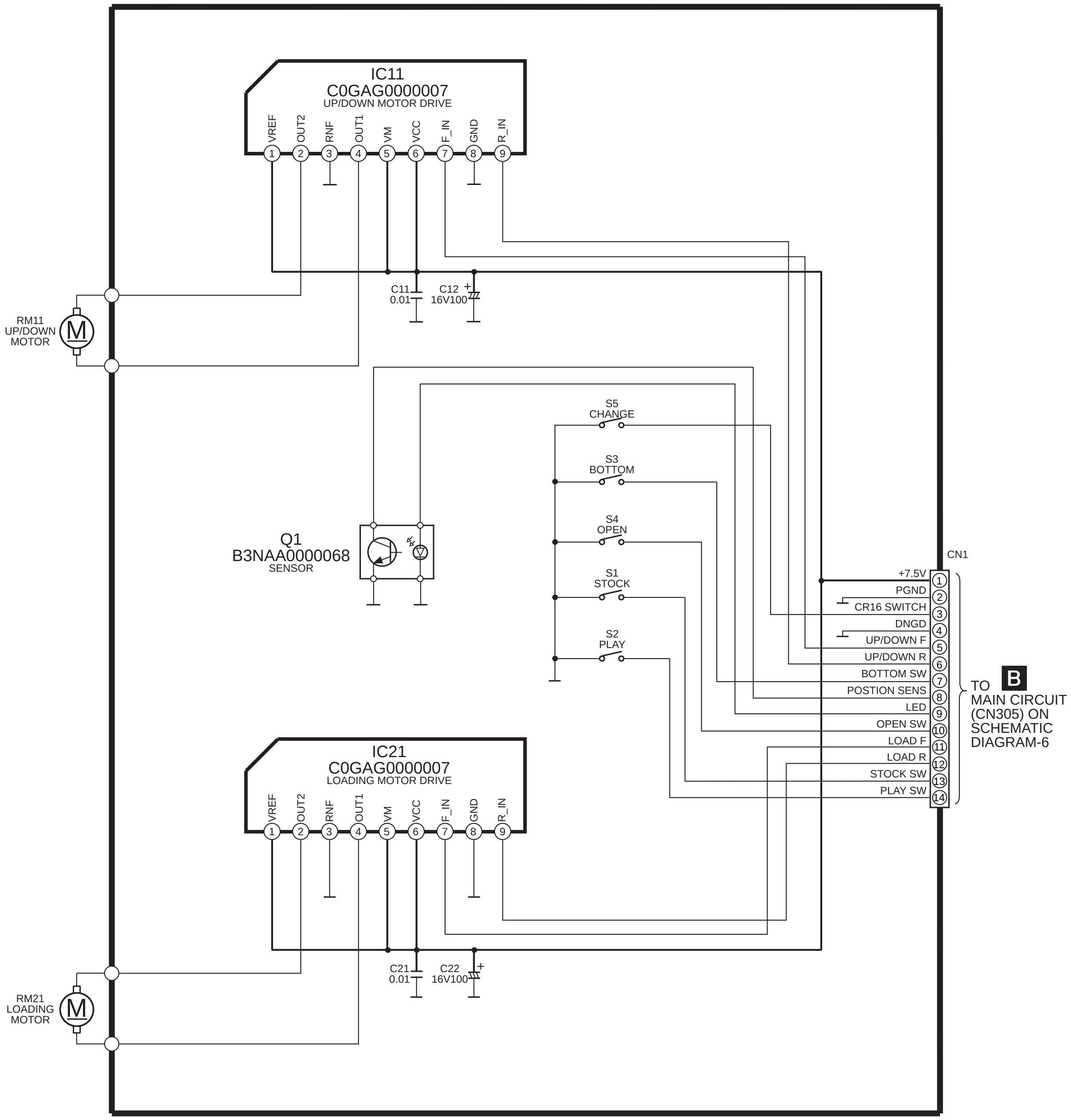


Q578
KRC102MTA
SWITCH
Q575
B1AAGC000006
ECONOMY SWITCH
D578
B0EAKM000117
R580
18
R581
18
R585
22
D581
B0EAKM000117
C585
25V100
Q577
2SC3940ARA
REGULATOR
SYS6V
C580
0.01
C584
16V1000
D585
B0EAKM000117
D579
B0EAKM000117
R583
820
C578
0.01
R584
150
C581
10V47
D582
B0BA6R600008
D586
B0EAKM000117
D580
B0EAKM000117
C575
50V4.7
D584
D587
C582
0.1
D589
D588
Q578
R576
10K
D584,D587,D588,D589
B0EAKM000117
C583
0.01
R577
10K
R578
3.3K
Q575
CN505
TO C
MAIN CONTROL
CIRCUIT
(H606/JW606)
ON SCHEMATIC
DIAGRAM-8
1 GND2
2 PCONT
3 SYNC
4 SYS6V
5 -VP
6 FL2
7 FL1
D505
B0AACK000004
T502
G4C2AAJ00007
T501
G4C6AFK00009
RL501
K6B1ADA00011
Q579
2SB0621AHA
-VP REGULATOR
R589
4.7
D592
B0EAKM000117
C588
63V100
FP502
K5G102A00039
F1
250V 1.0A
FC2
FC1
JK501
AC IN
E/EG ... 230V/50Hz,
EB ... 230 - 240V/50Hz
H503/
JW503
C548
0.01
R587
4.7K
C587
63V100
D593
B0EAKM000117
Z501
ERZV10V511CS
L503
G0B371HA0005
TO J
POWER CIRCUIT
(CN506) ON
SCHEMATIC
DIAGRAM-13
1 S3
2 S4
3 GND1
4 GND1
5 GND2
6 SUB+B
R586
150
C586
100V10
D594
B0BA03000015
FP501
K5G402A00025
E/EG
EB

# SCHEMATIC DIAGRAM-15

## L CD LOADING CIRCUIT

: +B SIGNAL LINE


IC11
C0GAG0000007
UP/DOWN MOTOR DRIVE
VREF
OUT2
RNF
OUT1
VM
VCC
F_IN
GND
R_IN
1
2
3
4
5
6
7
8
9
C11
0.01
C12
16V100
+
RM11
UP/DOWN
MOTOR
M
S5
CHANGE
S3
BOTTOM
S4
OPEN
S1
STOCK
S2
PLAY
Q1
B3NAA0000068
SENSOR
CN1
+7.5V
PGND
CR16 SWITCH
DNGD
UP/DOWN F
UP/DOWN R
BOTTOM SW
POSTION SENS
LED
OPEN SW
LOAD F
LOAD R
STOCK SW
PLAY SW
1
2
3
4
5
6
7
8
9
10
11
12
13
14
TO B
MAIN CIRCUIT
(CN305) ON
SCHEMATIC
DIAGRAM-6
IC21
C0GAG0000007
LOADING MOTOR DRIVE
VREF
OUT2
RNF
OUT1
VM
VCC
F_IN
GND
R_IN
1
2
3
4
5
6
7
8
9
C21
0.01
C22
16V100
+
RM21
LOADING
MOTOR
M

# CD SERVO P.C.B.

| Ref No. | IC702 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD PLAY | 0 | 0 | 1.3 | 3.3 | 1.6 | 0 | 1.6 | 0 | 0 | 0 | 1.6 | 0 | 1.8 | 0 | 3.3 | 1.5 | 0 | 1.6 | 1.8 | 1.6 |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Ref No. | IC702 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| CD PLAY | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.8 | 1.7 | 0.2 | 2.4 | 2.0 | 2.0 | 1.7 | 1.7 | 1.8 | 1.8 | 1.6 | 3.2 | 0 | 0.8 | 2.1 |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Ref No. | IC702 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| CD PLAY | 1.5 | 1.3 | 0 | 1.6 | 1.6 | 0.8 | 1.4 | 1.4 | 3.3 | 1.5 | 0 | 1.2 | 3.0 | 1.5 | 0 | 3.3 | 1.5 | 3.2 | 0 | 3.3 |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Ref No. | IC702 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| CD PLAY | 0 | 0 | 3.0 | - | 3.3 | 2.4 | 0 | 3.4 | 0 | - | - | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 3.2 | 0 |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Ref No. | IC 703 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD PLAY | 1.6 | 0 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 7.6 | 4.2 | 3.6 | 3.7 | 3.6 | 3.1 | 4.0 | 3.7 | 3.5 | 7.6 | 0 |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Ref No. | IC 703 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | | | | | | | | | | | | |
| CD PLAY | 7.6 | 0 | 0 | 0 | 7.6 | 1.6 | 1.6 | 1.6 | | | | | | | | | | | | |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |

| Ref No. | Q701 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | | | | | | | | | | | | | | | | |
| CD PLAY | 3.0 | 2.0 | 2.3 | | | | | | | | | | | | | | | | | |
| STANDBY | 0.5 | 0.4 | 0 | | | | | | | | | | | | | | | | | |

# MAIN P.C.B.

| Ref No. | IC300 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD PLAY | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 0 | 0 | 0 | 9.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0.5 | 0.4 | 0.2 | 0.4 | 0.1 | 0.1 |

| Ref No. | IC300 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 21 | 22 | 23 | 24 | | | | | | | | | | | | | | | | |
| CD PLAY | 4.5 | 4.5 | 4.5 | 0.7 | | | | | | | | | | | | | | | | |
| STANDBY | 0 | 0 | 0 | 0.2 | | | | | | | | | | | | | | | | |

| Ref No. | IC302 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD PLAY | 5.0 | 0 | 5.0 | 0 | 5.0 | 0 | 4.9 | 0 | 0 | 1.0 | 1.3 | 5.0 | 2.4 | 0 | - | 0 | 0 | 4.9 | 4.9 | 3.5 |
| STANDBY | 5.0 | 0 | 0 | 0 | 0 | 0 | 5.0 | 0 | 0 | 1.1 | 1.3 | 5.1 | 2.5 | 0 | 2.3 | 5.1 | 5.1 | 5.0 | 5.0 | 3.6 |

| Ref No. | IC302 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| CD PLAY | 0 | 0 | 0 | 4.5 | 4.1 | 2.0 | 0 | 3.8 | 5.0 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| STANDBY | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.9 |

| Ref No. | IC302 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| CD PLAY | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 4.9 | 0 | 0 | 5.0 | 0.2 | 5.0 | 5.0 | 4.9 | 4.9 | 4.9 | 0 | 5.0 |
| STANDBY | 0 | 0 | 0 | 0 | 0 | 0 | 0.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Ref No. | IC302 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| CD PLAY | 1.6 | 5.0 | 1.5 | 0 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5.0 |
| STANDBY | 0 | 5.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Ref No. | IC302 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| CD PLAY | 0 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.0 | 1.0 | 3.0 | 5.0 | 5.0 | 5.0 | 5.0 | 0 | 0 | 5.0 | 5.0 | 0 |
| STANDBY | 0 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.0 | 5.0 | 5.0 | 5.0 | 2.2 | 0 | 0 | 5.0 | 5.1 | 0 |

| Ref No. | IC303 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | | | | | | |
| CD PLAY | 0 | 5.0 | 0 | 0 | 1.6 | 1.6 | 0 | 1.9 | | | | | | | | | | | | |
| STANDBY | 0 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0.1 | | | | | | | | | | | | |

| Ref No. | IC305 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | |
| CD PLAY | 4.7 | 0 | 4.7 | 0 | 3.2 | | | | | | | | | | | | | | | |
| STANDBY | 0.7 | 0 | 0.7 | 0 | 0 | | | | | | | | | | | | | | | |

| Ref No. | Q200 | | | | Q201 | | | | Q222 | | | | Q223 | | | | Q224 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 4.0 | 3.9 | 0 | | 9.2 | 11.2 | 9.8 | | 0 | 0 | 0.7 | | 0 | 0 | 0.7 | | 0 | 0 | 0.7 | |
| STANDBY | 0 | 0 | 0 | | 0.6 | 0.9 | 0.9 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |

| Ref No. | Q301 | | | | Q302 | | | | Q303 | | | | Q304 | | | | Q305 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | 1 | 2 | 3 | | E | C | B | | E | C | B | |
| CD PLAY | 4.9 | 4.9 | 4.2 | | 0 | 0 | 4.8 | | 4.9 | 4.9 | 4.2 | | 0 | - | 1.0 | | 0 | 4.8 | 0 | |
| STANDBY | 5.1 | 0 | 5.0 | | 0 | 5.0 | 0 | | 5.1 | 5.0 | 4.4 | | 0 | 0 | 0 | | 0 | 5.0 | 0 | |

| Ref No. | Q306 | | | | Q307 | | | | Q308 | | | | Q309 | | | | Q310 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 0 | 4.8 | 0 | | 0 | 0 | 0.7 | | 0 | 1.8 | 0 | | 0 | 1.4 | 0 | | 0 | 1.4 | 0 | |
| STANDBY | 0 | 5.0 | 0 | | 0 | 0 | 0.7 | | 0 | 0.6 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |

| Ref No. | Q400 | | | | Q422 | | | | Q423 | | | | Q424 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | | | | |
| CD PLAY | 4.3 | 4.2 | 0 | | 0 | 0 | 0.7 | | 0 | 0 | 0.7 | | 0 | 0 | 0.7 | | | | | |
| STANDBY | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | | | | |

## MAIN CONTROL P.C.B.

| Ref No. | IC 600 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD PLAY | -30.4 | -30.4 | 2.5 | 0 | 2.0 | 2.0 | 4.8 | 4.9 | 4.0 | 1.5 | -28.0 | -28.0 | -28.0 | -28.0 | -28.0 | -28.0 | -28.0 | -28.0 | -28.0 | -28.0 |
| STANDBY | -27.6 | -27.6 | 0 | 0 | 0.2 | 0.2 | 0.4 | 0 | 0 | 0 | -26.4 | -26.5 | -26.5 | -26.5 | -26.6 | -26.6 | -26.6 | -26.6 | -26.7 | -26.7 |

| Ref No. | IC 600 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| CD PLAY | -28.0 | -28.0 | - | -28.0 | - | - | - | -30.4 | -27.9 | -27.9 | - | - | -30.4 | -30.4 | -30.5 | - | - | - | -27.9 | -27.9 |
| STANDBY | -30.0 | -26.8 | -26.8 | -26.9 | -26.9 | -27.0 | -27.0 | -27.1 | -27.1 | -27.1 | -27.2 | -27.2 | -27.3 | -27.3 | -27.3 | -27.4 | -27.4 | -27.5 | -27.5 | -27.5 |

## PANEL P.C.B.

| Ref No. | Q600 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | | | | | | | | | | | | | | | | |
| CD PLAY | 0 | 7.8 | 0 | | | | | | | | | | | | | | | | | |
| STANDBY | 0 | 0 | 0 | | | | | | | | | | | | | | | | | |

## DECK P.C.B.

| Ref No. | IC 1000 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | |
| CD PLAY | 5.9 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | |
| STANDBY | 0.3 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | |

| Ref No. | IC 1001 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| CD PLAY | 0 | 0.7 | 5.0 | 4.3 | 0 | 4.9 | 0 | 0 | 0.1 | 5.9 | 0 | 8.7 | 0 | 0 | 0 | 0 | 3.6 | 0.2 | 4.3 | 5.0 |
| STANDBY | 0 | 0.2 | 0.2 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.2 |

| Ref No. | IC 1001 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 21 | 22 | | | | | | | | | | | | | | | | | | |
| CD PLAY | 0.7 | 0 | | | | | | | | | | | | | | | | | | |
| STANDBY | 0.2 | 0 | | | | | | | | | | | | | | | | | | |

| Ref No. | Q1101 | | | | Q1201 | | | | Q1302 | | | | Q1303 | | | | Q1304 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 0 | 0 | 0.7 | | 0 | 0 | 0.7 | | 1.5 | 1.3 | 0 | | 0 | 5.9 | 0 | | 0 | 0 | 5.9 | |
| STANDBY | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | -0.2 | 0 | | 0 | 0 | 0 | |

| Ref No. | Q1309 | | | | Q1310 | | | | Q1312 | | | | Q1314 | | | | Q1315 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 0 | 8.8 | 0 | | 0 | 8.8 | 0 | | 0 | 0 | 0 | | 9.8 | -0.7 | 9.8 | | 9.8 | 0 | 9.8 | |
| STANDBY | 0 | 0.3 | 0 | | 0 | 0.3 | 0 | | 0 | 0 | 0 | | 0.3 | 0 | 0.4 | | 0.4 | 0 | 0.4 | |

| Ref No. | Q1316 | | | | Q1317 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | | | | | | | | | | | | |
| CD PLAY | 0 | 9.6 | -1.0 | | 0 | 0 | 0 | | | | | | | | | | | | | |
| STANDBY | 0 | 0.4 | 0 | | 0 | 0 | 0 | | | | | | | | | | | | | |

## DECK MECHANISM P.C.B.

| Ref No. | IC 971 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | |
| CD PLAY | 0.7 | 5.0 | 3.8 | 5.0 | | | | | | | | | | | | | | | | |
| STANDBY | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | |

## CD LOADING P.C.B

| Ref No. | IC 11 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | | | | | |
| CD PLAY | 7.6 | 0 | 0 | 0 | 7.6 | 7.6 | 5.0 | 0 | 5.0 | | | | | | | | | | | |
| STANDBY | 0.3 | 0 | 0 | 0 | 0.3 | 0.3 | 0 | 0 | 0 | | | | | | | | | | | |

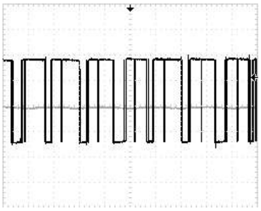
| Ref No. | IC 21 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | | | | | |
| CD PLAY | 7.6 | 0 | 0 | 0 | 7.6 | 7.6 | 5.0 | 0 | 5.0 | | | | | | | | | | | |
| STANDBY | 0.3 | 0 | 0 | 0 | 0.3 | 0.3 | 0 | 0 | 0 | | | | | | | | | | | |

# POWER P.C.B.

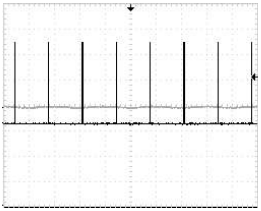
| Ref No. | IC 500 | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | | |
| CD PLAY | -35.8 | 36.1 | 0 | 36.1 | -35.7 | 0 | 0 | 0.8 | 0 | -15.1 | 0 | 0 | 0 | 0 | 0 | 0 | 36.2 | -35.9 | | |
| STANDBY | 0.2 | 36.3 | 0 | 36.3 | 0.2 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 36.3 | 0.2 | | |
| Ref No. | IC 501 | | | | | | | | | | | | | | | | | | | |
| MODE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | | | | | | |
| CD PLAY | 0 | 0 | 0 | -8.7 | 0 | 0 | 0 | 9.1 | | | | | | | | | | | | |
| STANDBY | 0 | 0 | 0 | -0.3 | 0 | 0 | 0 | 0.3 | | | | | | | | | | | | |
| Ref No. | Q501 | | | | Q502 | | | | Q505 | | | | Q506 | | | | Q508 | | | |
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 9.2 | 14.8 | 9.7 | | 14.6 | 9.9 | 14.0 | | 0 | -9.4 | -0.6 | | -8.8 | -35.0 | -9.4 | | 9.1 | 13.9 | 9.7 | |
| STANDBY | 0.5 | 0.4 | 0.4 | | 0.4 | 0.5 | 0.4 | | 0 | 0.1 | 0.6 | | 0.6 | 0.2 | 0.2 | | 0 | 0.4 | 0.4 | |
| Ref No. | Q509 | | | | Q514 | | | | Q515 | | | | Q516 | | | | Q517 | | | |
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 13.9 | 0 | 14.6 | | 11.5 | 14.8 | 12.1 | | 0.1 | 5.0 | 0 | | 0 | 5.0 | 0.1 | | 4.9 | 7.7 | 5.5 | |
| STANDBY | 0.4 | 0.4 | 0.5 | | 0.9 | 0.4 | 0.5 | | 0.4 | 0.9 | 0 | | 0 | 0.9 | 0.4 | | 0.6 | 0.5 | 0.9 | |
| Ref No. | Q519 | | | | Q520 | | | | Q700 | | | | Q702 | | | | Q703 | | | |
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 0 | 4.2 | -0.4 | | 7.7 | 9.9 | 8.4 | | 0 | 0 | 0.2 | | 0 | 9.8 | 0 | | 0 | 5.0 | 0 | |
| STANDBY | 0 | 0 | 0.7 | | 0.5 | 0.5 | 0.5 | | 0 | 0 | 0.1 | | 0 | 0.5 | 0 | | 0 | 0.9 | 0 | |
| Ref No. | Q704 | | | | Q710 | | | | Q711 | | | | Q714 | | | | Q715 | | | |
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | 0 | -5.9 | 0 | | 0 | 0 | -5.9 | | 0 | 0 | -5.9 | | -1.4 | 9.1 | -0.8 | | -1.4 | 9,1 | -0.8 | |
| STANDBY | 1.5 | 1.2 | 0 | | 0 | 0 | 0.6 | | 0 | 0 | 0.6 | | 0.6 | 0.5 | 0 | | 0.6 | 0.5 | 0 | |
| Ref No. | Q716 | | | | Q717 | | | | Q718 | | | | Q719 | | | | Q720 | | | |
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | E | C | B | |
| CD PLAY | -0.7 | 9,1 | -0.1 | | -0.7 | 9.1 | -0.1 | | 0 | 0 | -5.9 | | 0 | 0 | -5.9 | | 0 | 0 | 0 | |
| STANDBY | 0.6 | 0.5 | 0 | | 0.6 | 0.5 | 0 | | 0 | 0 | 0.6 | | 0 | 0 | 0.6 | | 0 | 0.1 | 0 | |
| Ref No. | Q721 | | | | Q725 | | | | Q726 | | | | | | | | | | | |
| MODE | E | C | B | | E | C | B | | E | C | B | | | | | | | | | |
| CD PLAY | 0 | 0 | 0 | | 0 | 0 | -5.9 | | 0 | 0 | -5.9 | | | | | | | | | |
| STANDBY | 0 | 0.1 | 0 | | 0 | 0 | 0.7 | | 0 | 0 | 0.7 | | | | | | | | | |

# TRANSFORMER P.C.B.

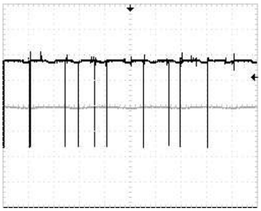
| Ref No. | Q575 | | | | Q577 | | | | Q578 | | | | Q579 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODE | E | C | B | | E | C | B | | E | C | B | | E | C | B | | | | | |
| CD PLAY | 0 | 0 | 0.7 | | 5.9 | 9.0 | 6.6 | | 0 | 3.5 | -0.2 | | -29.9 | -49.2 | -30.5 | | | | | |
| STANDBY | 0 | 5.9 | 0 | | 5.9 | 8.5 | 6.6 | | 0 | 3.6 | -0.2 | | -28.8 | -28.7 | 0 | | | | | |



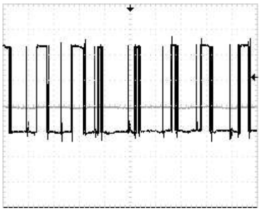
CN306 PIN 4
CD PLAY
3.64Vp-p (10msec.div)



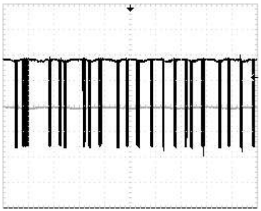
CN306 PIN 5
CD PLAY
3.24Vp-p (10msec.div)



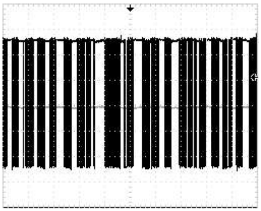
CN306 PIN 6
CD PLAY
3.76Vp-p (10msec.div)



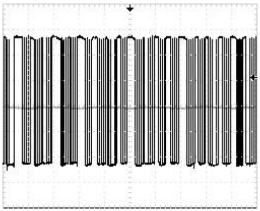
CN306 PIN 7
CD PLAY
4.12Vp-p (10msec.div)



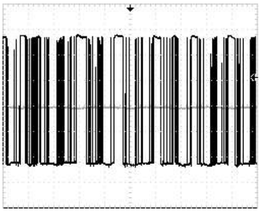
CN306 PIN 8
CD PLAY
3.96Vp-p (10msec.div)



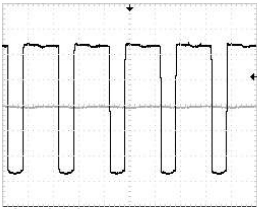
CN308 PIN 10
CD PLAY
5.40Vp-p (10msec.div)



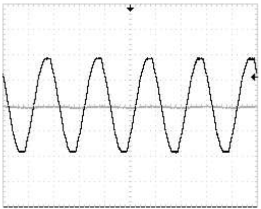
CN308 PIN 11
CD PLAY
5.32Vp-p (10msec.div)



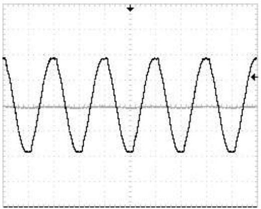
CN308 PIN 12
CD PLAY
5.20Vp-p (10msec.div)



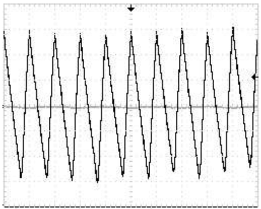
CN308 PIN 15
CD PLAY
5.20Vp-p (10msec.div)



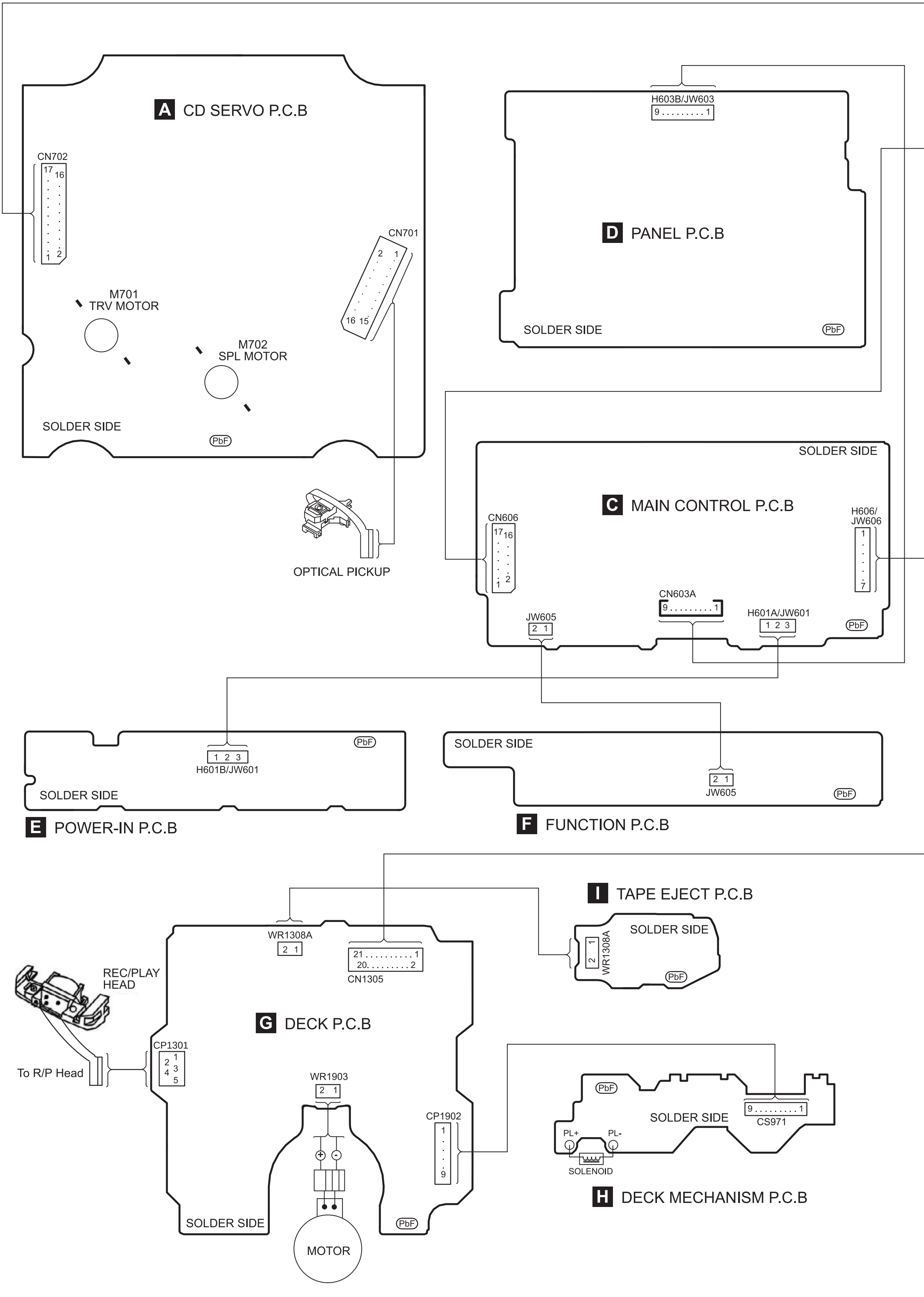
CN506 PIN 1
CD PLAY
75.2Vp-p (10msec.div)

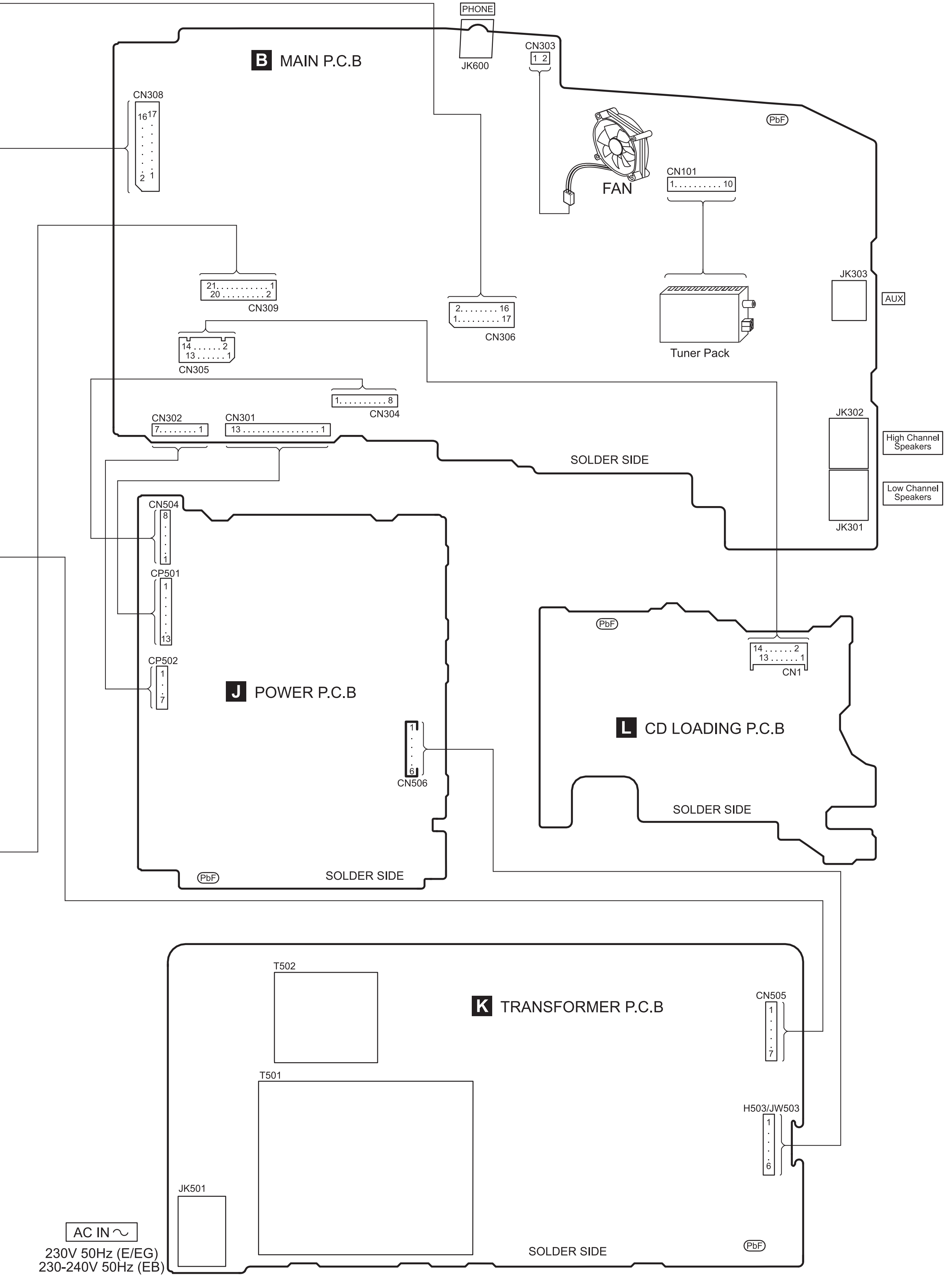


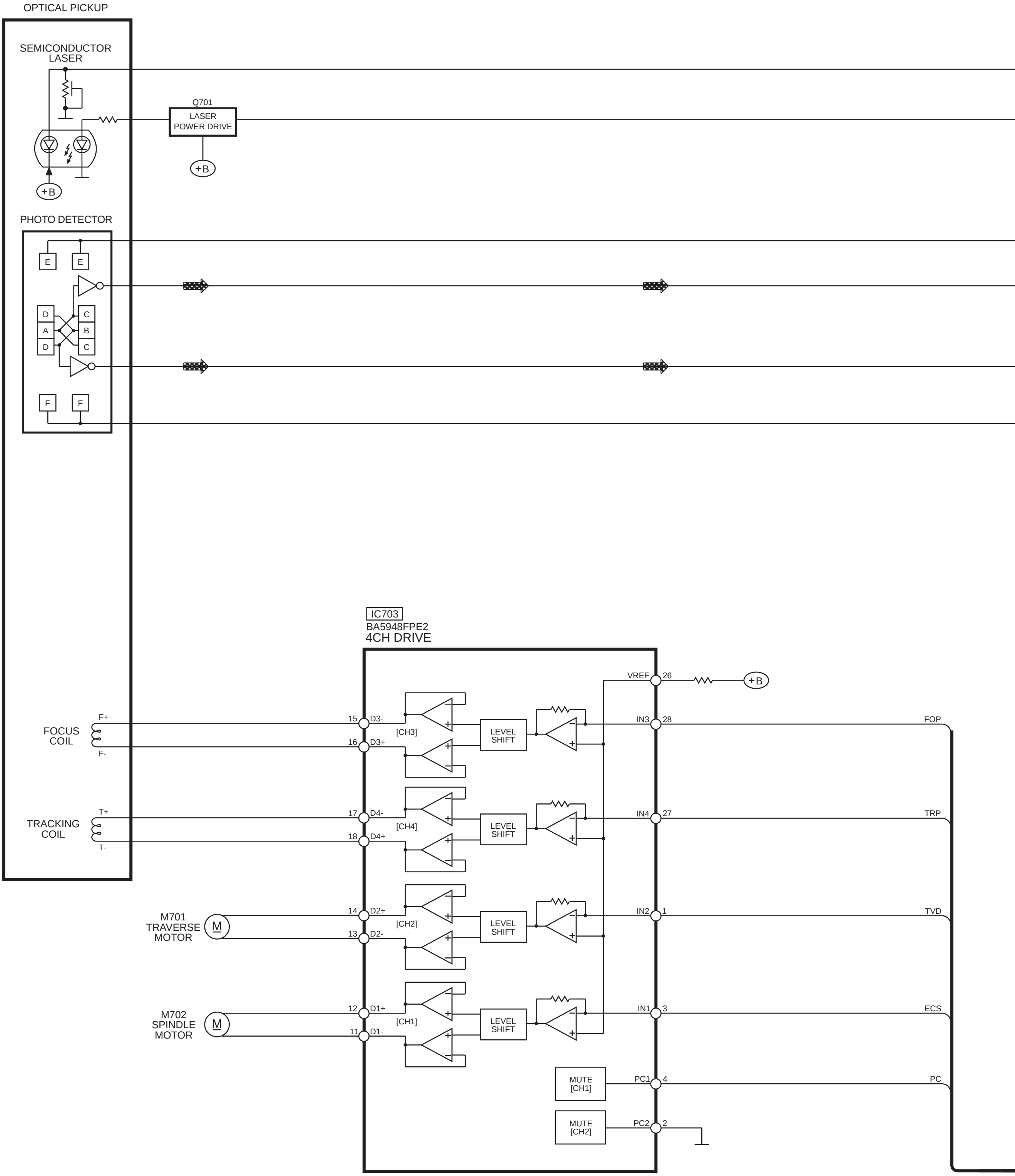
CN506 PIN 2
CD PLAY
74.4Vp-p (10msec.div)

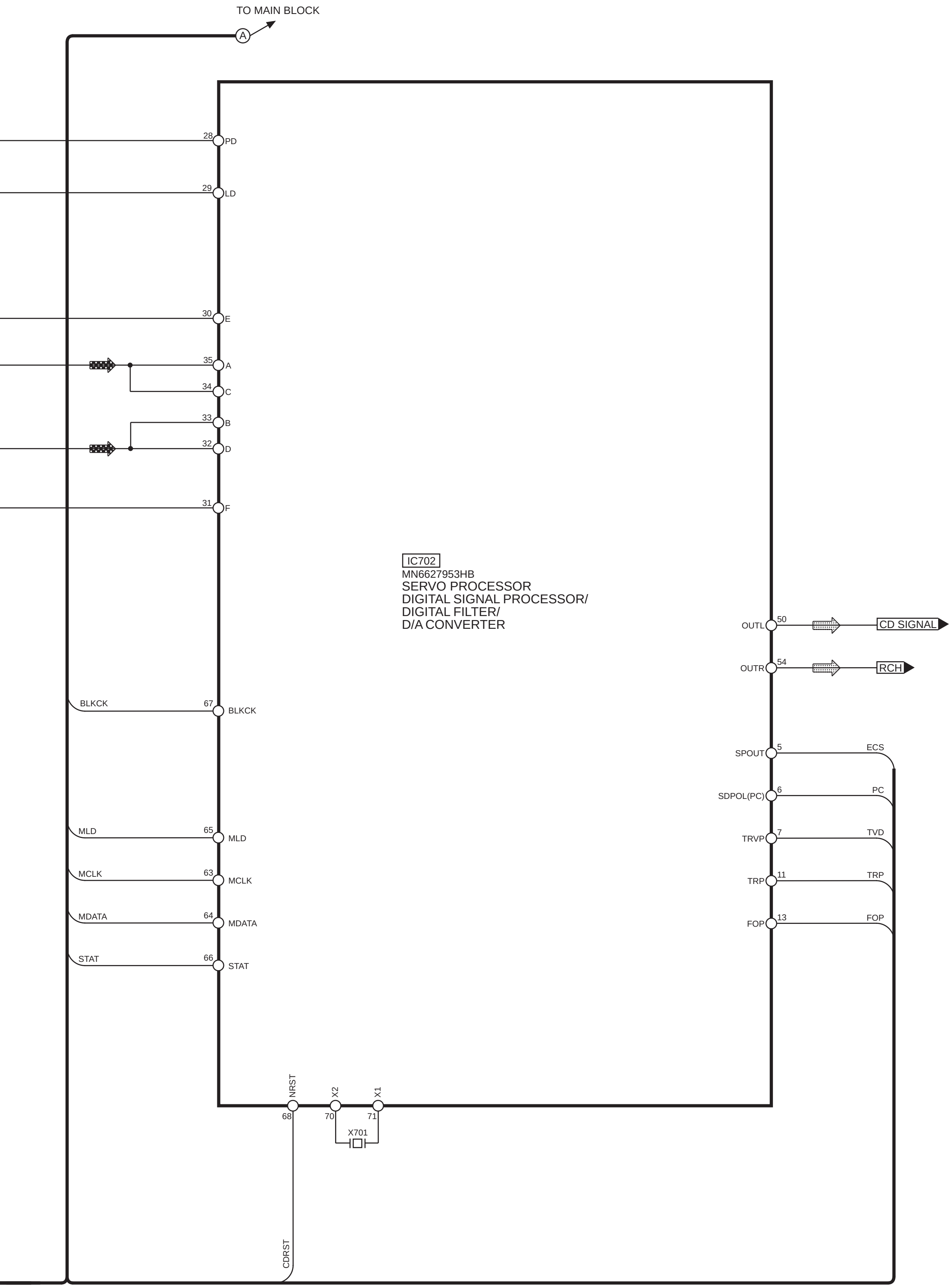


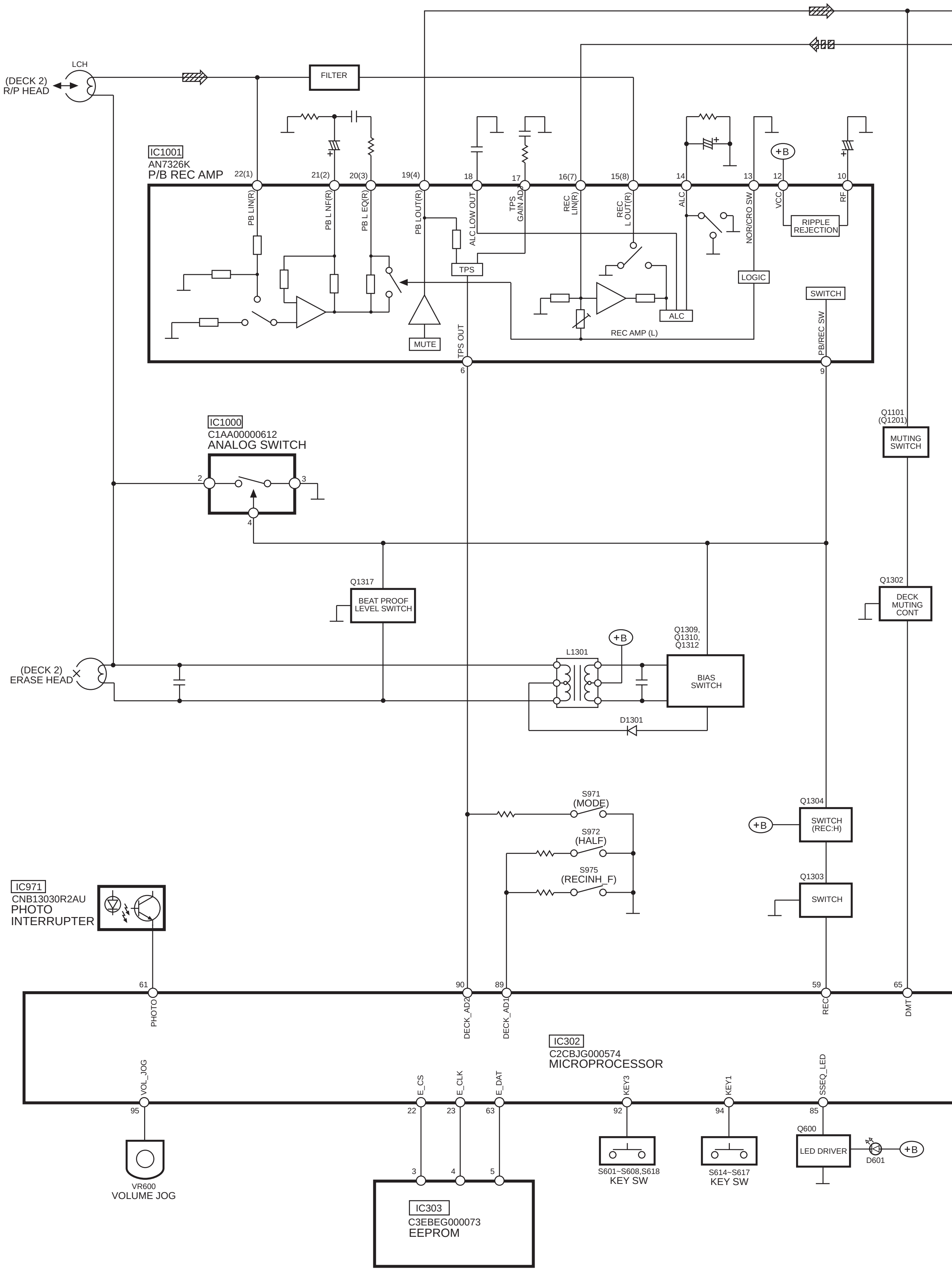
CN506 PIN 6
CD PLAY
1.22Vp-p (10msec.div)

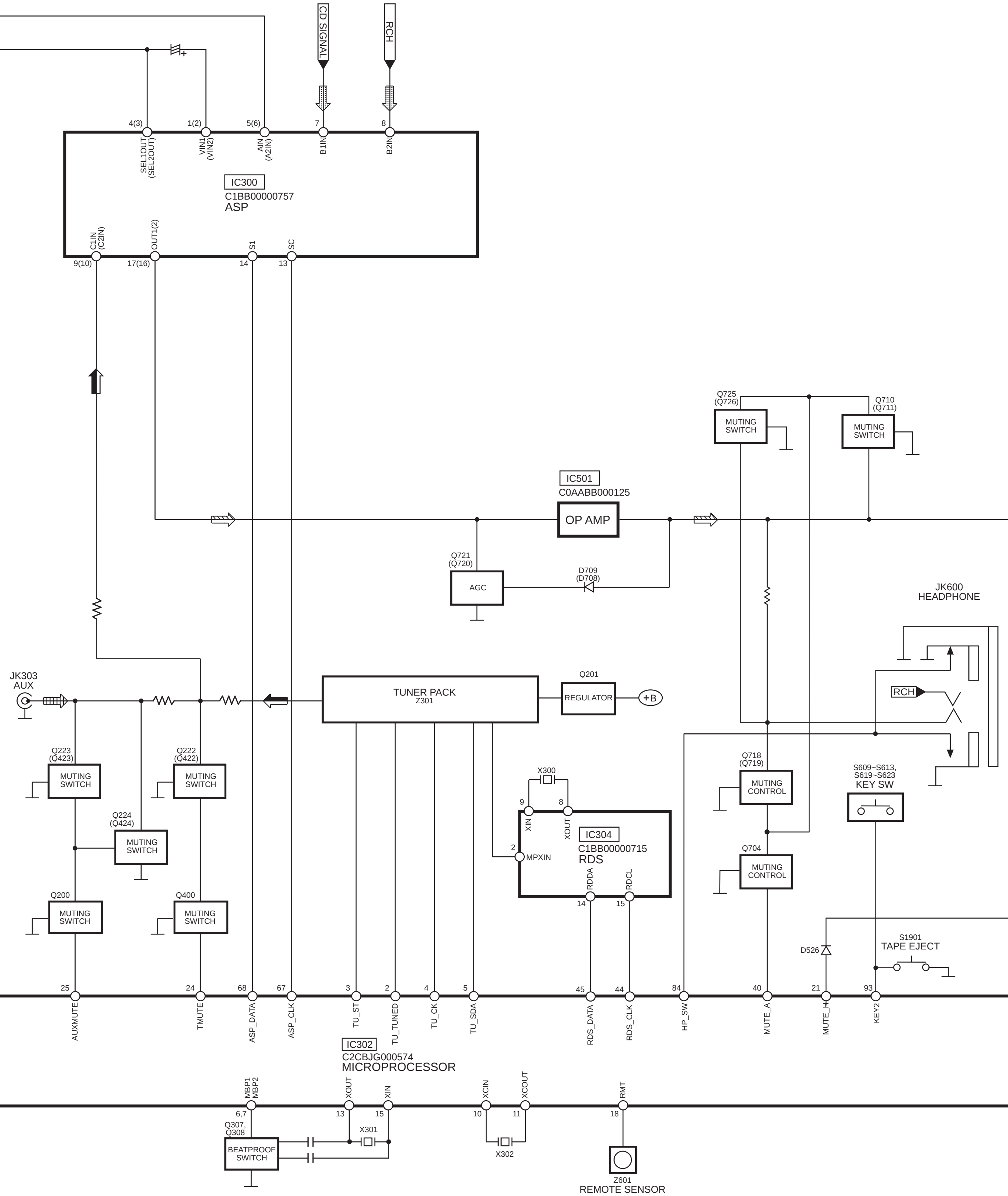

A CD SERVO P.C.B
CN702
17 16
1 2
CN701
2 1
16 15
M701
TRV MOTOR
M702
SPL MOTOR
SOLDER SIDE
PbF
OPTICAL PICKUP
H603B/JW603
9 . . . . . . . . . 1
D PANEL P.C.B
SOLDER SIDE
PbF
SOLDER SIDE
C MAIN CONTROL P.C.B
CN606
17 16
1 2
H606/
JW606
1
7
CN603A
9 . . . . . . . . . 1
JW605
2 1
H601A/JW601
1 2 3
PbF
PbF
1 2 3
H601B/JW601
SOLDER SIDE
E POWER-IN P.C.B
SOLDER SIDE
2 1
JW605
PbF
F FUNCTION P.C.B
I TAPE EJECT P.C.B
SOLDER SIDE
1 2
WR1308A
PbF
WR1308A
2 1
21 . . . . . . . . . . 1
20. . . . . . . . . . 2
CN1305
REC/PLAY
HEAD
G DECK P.C.B
CP1301
2 1
4 3
5
To R/P Head
WR1903
2 1
CP1902
1
9
+
-
SOLDER SIDE
MOTOR
PbF
PbF
SOLDER SIDE
9 . . . . . . . . . 1
CS971
PL+
PL-
SOLENOID
H DECK MECHANISM P.C.B

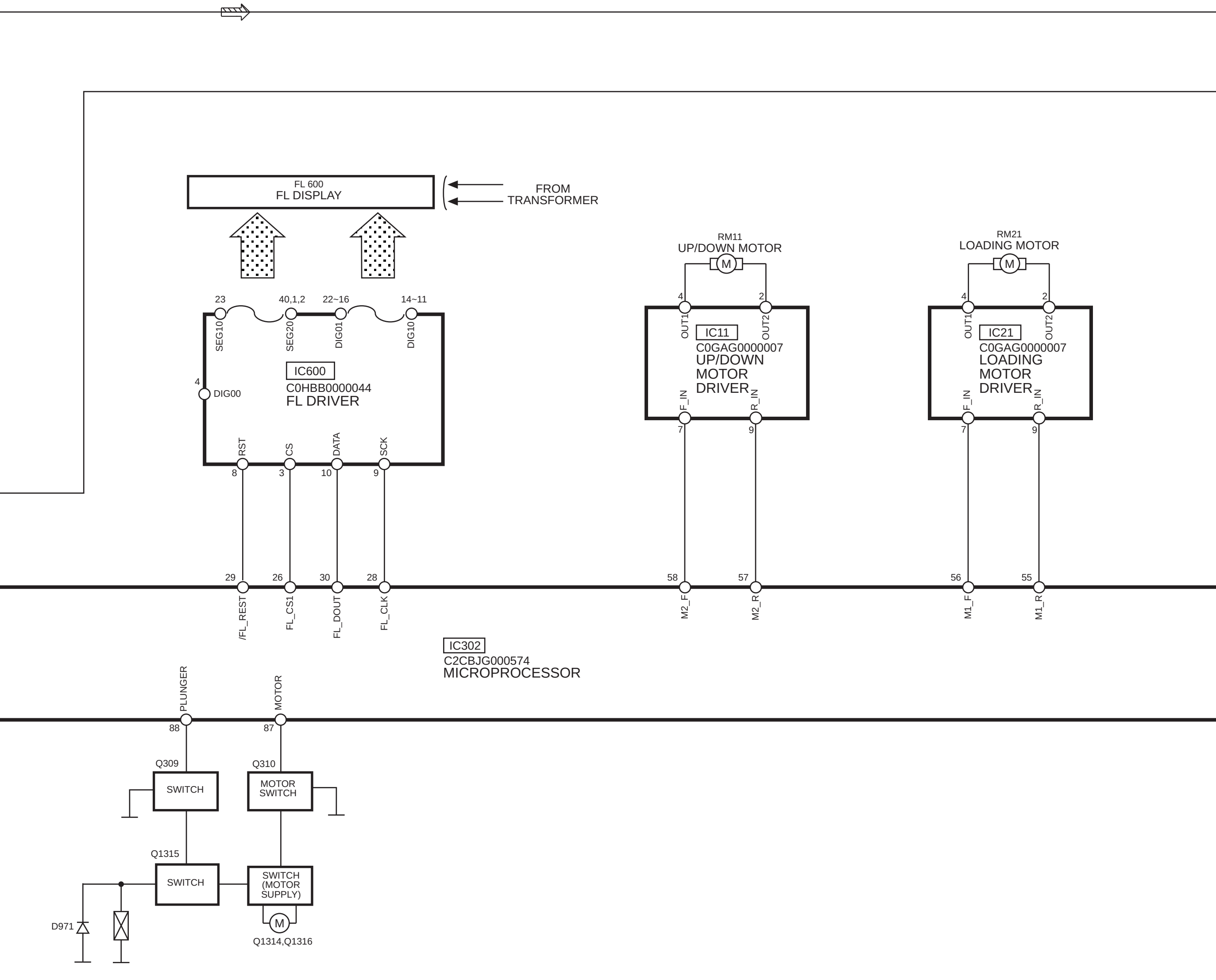

PHONE
JK600
CN303
1 2
B MAIN P.C.B
CN308
16 17
2 1
FAN
CN101
1. . . . . . . . . . 10
PbF
JK303
AUX
21. . . . . . . . . . . 1
20 . . . . . . . . . 2
CN309
2. . . . . . . . 16
1. . . . . . . . . 17
CN306
Tuner Pack
14 . . . . . . 2
13 . . . . . . 1
CN305
1. . . . . . . . . . 8
CN304
JK302
High Channel Speakers
CN302
7. . . . . . . . 1
CN301
13 . . . . . . . . . . . . . . . . 1
SOLDER SIDE
Low Channel Speakers
JK301
CN504
8
1
CP501
1
13
CP502
1
7
J POWER P.C.B
1
6
CN506
PbF
SOLDER SIDE
PbF
14 . . . . . . 2
13 . . . . . . 1
CN1
L CD LOADING P.C.B
SOLDER SIDE
T502
K TRANSFORMER P.C.B
CN505
1
7
T501
H503/JW503
1
6
JK501
AC IN ∼
230V 50Hz (E/EG)
230-240V 50Hz (EB)
SOLDER SIDE
PbF

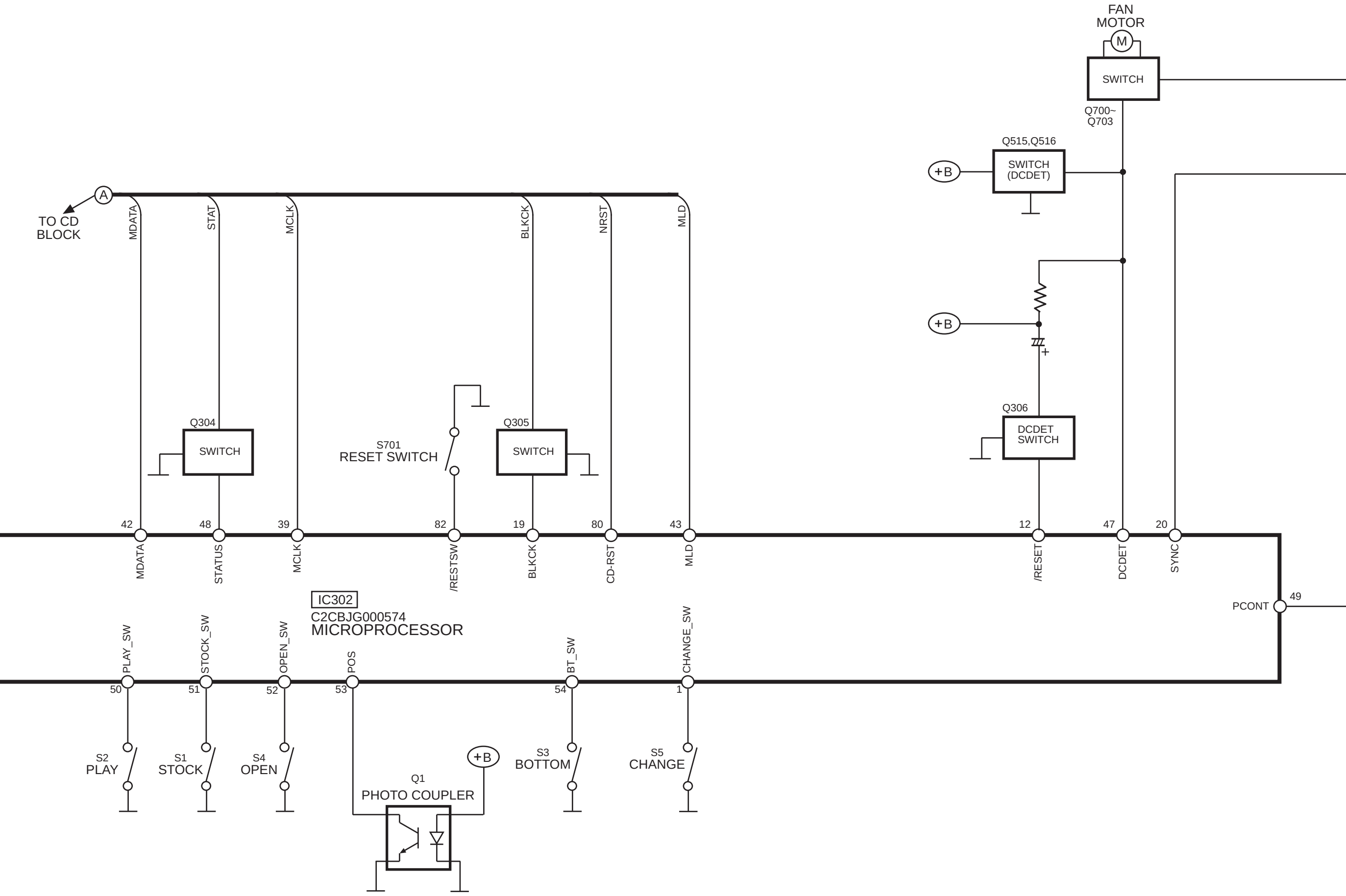

OPTICAL PICKUP
SEMICONDUCTOR LASER
+B
Q701
LASER POWER DRIVE
+B
PHOTO DETECTOR
E
E
D
A
D
C
B
C
F
F
FOCUS COIL
F+
F-
TRACKING COIL
T+
T-
M701 TRAVERSE MOTOR
M
M702 SPINDLE MOTOR
M
IC703
BA5948FPE2
4CH DRIVE
15 D3-
16 D3+
[CH3]
17 D4-
18 D4+
[CH4]
14 D2+
13 D2-
[CH2]
12 D1+
11 D1-
[CH1]
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
VREF 26
+B
IN3 28
IN4 27
IN2 1
IN1 3
MUTE [CH1]
PC1 4
MUTE [CH2]
PC2 2
FOP
TRP
TVD
ECS
PC


TO MAIN BLOCK
A
28 PD
29 LD
30 E
35 A
34 C
33 B
32 D
31 F
IC702
MN6627953HB
SERVO PROCESSOR
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/
D/A CONVERTER
OUTL 50
CD SIGNAL
OUTR 54
RCH
BLKCK 67 BLKCK
MLD 65 MLD
MCLK 63 MCLK
MDATA 64 MDATA
STAT 66 STAT
SPOUT 5 ECS
SDPOL(PC) 6 PC
TRVP 7 TVD
TRP 11 TRP
FOP 13 FOP
NRST 68
X2 70
X1 71
X701
CDRST


LCH
(DECK 2)
R/P HEAD
FILTER
IC1001
AN7326K
P/B REC AMP
22(1)
21(2)
20(3)
19(4)
18
17
16(7)
15(8)
14
13
12
10
+B
PB LIN(R)
PB L NF(R)
PB L EQ(R)
PB LOUT(R)
ALC LOW OUT
TPS
GAIN ADJ
REC
LIN(R)
REC
L OUT(R)
ALC
NOR/CRO SW
VCC
RF
RIPPLE
REJECTION
TPS
LOGIC
SWITCH
ALC
REC AMP (L)
MUTE
TPS OUT
PB/REC SW
6
9
IC1000
C1AA00000612
ANALOG SWITCH
2
3
4
Q1101
(Q1201)
MUTING
SWITCH
Q1317
BEAT PROOF
LEVEL SWITCH
Q1302
DECK
MUTING
CONT
L1301
+B
Q1309,
Q1310,
Q1312
BIAS
SWITCH
(DECK 2)
ERASE HEAD
D1301
S971
(MODE)
S972
(HALF)
S975
(RECINH_F)
Q1304
+B
SWITCH
(REC:H)
Q1303
SWITCH
IC971
CNB13030R2AU
PHOTO
INTERRUPTER
61
90
89
59
65
PHOTO
DECK_AD2
DECK_AD1
REC
DMT
IC302
C2CBJG000574
MICROPROCESSOR
VOL_JOG
E_CS
E_CLK
E_DAT
KEY3
KEY1
SSEQ_LED
95
22
23
63
92
94
85
Q600
LED DRIVER
D601
+B
VR600
VOLUME JOG
3
4
5
S601~S608,S618
KEY SW
S614~S617
KEY SW
IC303
C3EBEG000073
EEPROM


CD SIGNAL
RCH
4(3)
1(2)
5(6)
7
8
SEL1OUT (SEL2OUT)
VIN1 (VIN2)
AIN (A2IN)
B1IN
B2IN
IC300
C1BB00000757
ASP
C1IN (C2IN)
OUT1(2)
S1
SC
9(10)
17(16)
14
13
Q725 (Q726)
MUTING SWITCH
Q710 (Q711)
MUTING SWITCH
IC501
C0AABB000125
OP AMP
Q721 (Q720)
AGC
D709 (D708)
JK600
HEADPHONE
RCH
JK303
AUX
Q201
TUNER PACK
Z301
REGULATOR
+B
Q223 (Q423)
MUTING SWITCH
Q222 (Q422)
MUTING SWITCH
Q224 (Q424)
MUTING SWITCH
Q200
MUTING SWITCH
Q400
MUTING SWITCH
X300
9
8
XIN
XOUT
IC304
C1BB00000715
RDS
2
MPXIN
RDDA
RDCL
14
15
Q718 (Q719)
MUTING CONTROL
Q704
MUTING CONTROL
S609~S613, S619~S623
KEY SW
D526
S1901
TAPE EJECT
25
24
68
67
3
2
4
5
45
44
84
40
21
93
AUXMUTE
TMUTE
ASP_DATA
ASP_CLK
TU_ST
TU_TUNED
TU_CK
TU_SDA
RDS_DATA
RDS_CLK
HP_SW
MUTE_A
MUTE_H
KEY2
IC302
C2CBJG000574
MICROPROCESSOR
MBP1 MBP2
XOUT
XIN
XCIN
XCOUT
RMT
6,7
13
15
10
11
18
Q307, Q308
BEATPROOF SWITCH
X301
X302
Z601
REMOTE SENSOR


FL 600
FL DISPLAY
FROM
TRANSFORMER
RM11
UP/DOWN MOTOR
M
RM21
LOADING MOTOR
M
23
40,1,2
22~16
14~11
SEG10
SEG20
DIG01
DIG10
4
DIG00
IC600
C0HBB0000044
FL DRIVER
RST
CS
DATA
SCK
8
3
10
9
4
2
OUT1
OUT2
IC11
C0GAG0000007
UP/DOWN
MOTOR
DRIVER
F_IN
R_IN
7
9
4
2
OUT1
OUT2
IC21
C0GAG0000007
LOADING
MOTOR
DRIVER
F_IN
R_IN
7
9
29
26
30
28
58
57
56
55
/FL_REST
FL_CS1
FL_DOUT
FL_CLK
M2_F
M2_R
M1_F
M1_R
IC302
C2CBJG000574
MICROPROCESSOR
PLUNGER
MOTOR
88
87
Q309
SWITCH
Q310
MOTOR
SWITCH
Q1315
SWITCH
SWITCH
(MOTOR
SUPPLY)
M
D971
Q1314,Q1316

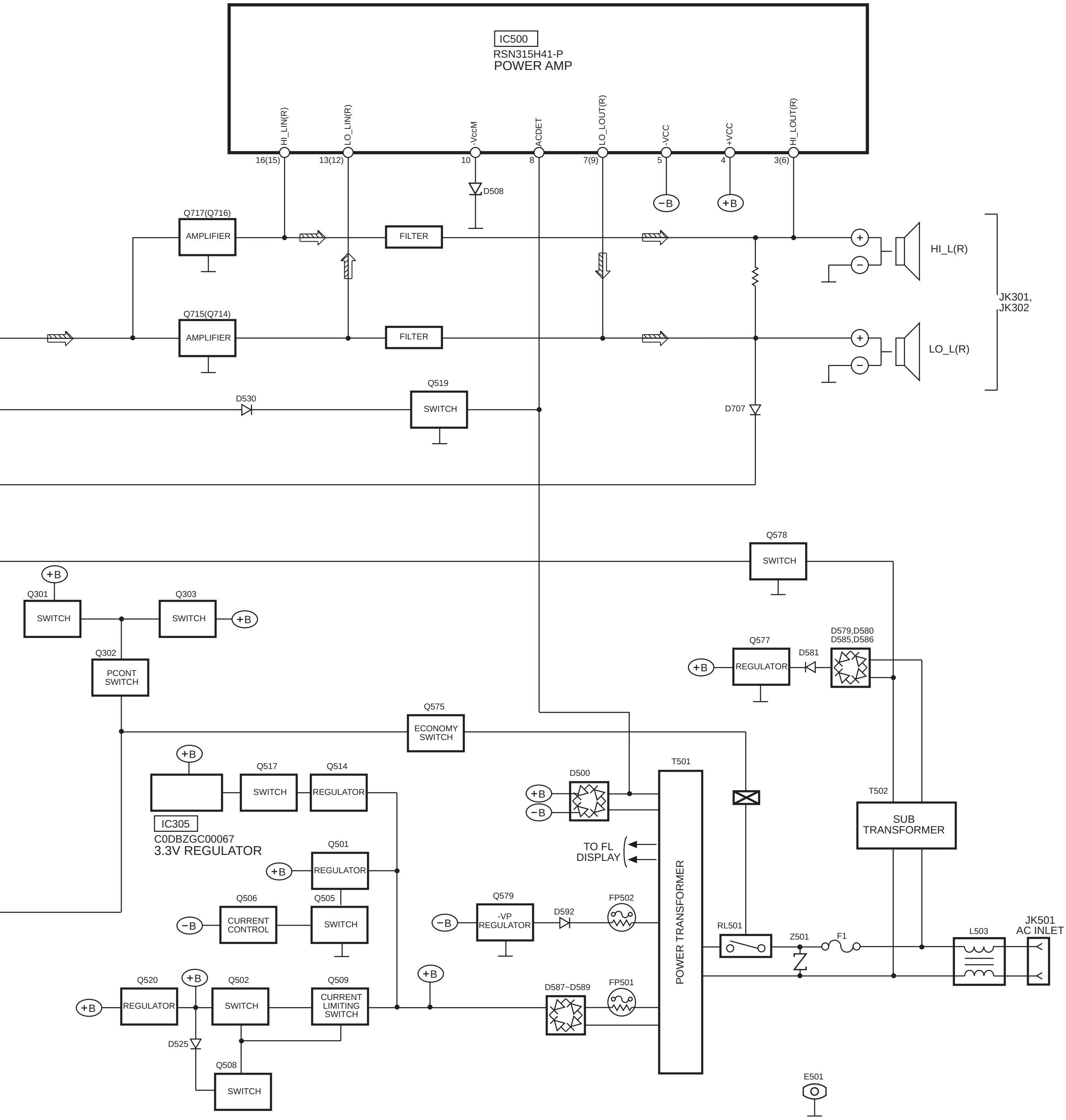

FAN
MOTOR
M
SWITCH
Q700~
Q703
Q515,Q516
+B
SWITCH
(DCDET)
A
TO CD
BLOCK
MDATA
STAT
MCLK
BLKCK
NRST
MLD
+B
+
Q306
DCDET
SWITCH
Q304
SWITCH
S701
RESET SWITCH
Q305
SWITCH
42
48
39
82
19
80
43
12
47
20
MDATA
STATUS
MCLK
/RESTSW
BLKCK
CD-RST
MLD
/RESET
DCDET
SYNC
49
PCONT
IC302
C2CBJG000574
MICROPROCESSOR
PLAY_SW
STOCK_SW
OPEN_SW
POS
BT_SW
CHANGE_SW
50
51
52
53
54
1
S2
PLAY
S1
STOCK
S4
OPEN
Q1
PHOTO COUPLER
+B
S3
BOTTOM
S5
CHANGE

SIGNAL LINES

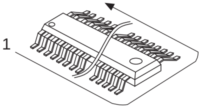
⇨ : MAIN SIGNAL LINE ▨ : TAPE PLAYBACK SIGNAL LINE ▩ : CD-DA SIGNAL LINE

➡ : FM/AM SIGNAL LINE ▥ : TAPE RECORD SIGNAL LINE ▤ : AUX SIGNAL LINE

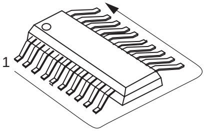
( ) Indicates Pin No. of Right Channel Note : Signal Lines are applicable to the Left Channel only.


IC500
RSN315H41-P
POWER AMP
HI_LIN(R)
LO_LIN(R)
-VccM
ACDET
LO_LOUT(R)
-VCC
+VCC
HI_LOUT(R)
16(15)
13(12)
10
8
7(9)
5
4
3(6)
D508
−B
+B
Q717(Q716)
AMPLIFIER
FILTER
+
−
HI_L(R)
JK301,
JK302
Q715(Q714)
AMPLIFIER
FILTER
LO_L(R)
D530
Q519
SWITCH
D707
Q578
SWITCH
+B
Q301
SWITCH
Q303
SWITCH
+B
Q302
PCONT
SWITCH
Q577
REGULATOR
D581
D579,D580
D585,D586
+B
Q575
ECONOMY
SWITCH
+B
Q517
SWITCH
Q514
REGULATOR
IC305
C0DBZGC00067
3.3V REGULATOR
D500
+B
−B
T501
T502
SUB
TRANSFORMER
TO FL
DISPLAY
Q501
REGULATOR
+B
Q506
CURRENT
CONTROL
−B
Q505
SWITCH
Q579
-VP
REGULATOR
−B
D592
FP502
POWER TRANSFORMER
RL501
Z501
F1
L503
JK501
AC INLET
Q520
REGULATOR
+B
+B
Q502
SWITCH
Q509
CURRENT
LIMITING
SWITCH
+B
D587~D589
FP501
D525
Q508
SWITCH
E501

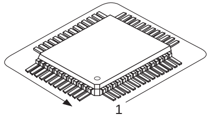
BA5948FPE2 (28P)
AN7326K (22P)



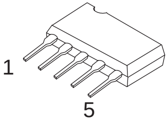
C1BB00000757 (24P)
C1BB00000715(16P)



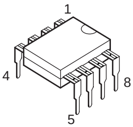
C0HBB0000044 (40P)
MN6627953HB (80P)
C2CBJG000574 (100P)



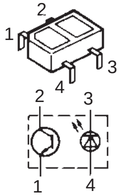
C1AA00000612 (5P)



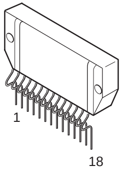
C0AABB000125 (8P)



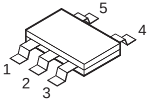
CNB13030R2AU (4P)



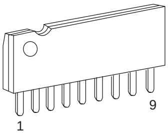
RSN315H41-P (18P)



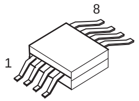
C0DBZGC00067



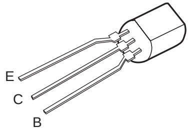
C0GAG0000007 (9P)



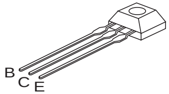
C3EBEG000073 (8P)



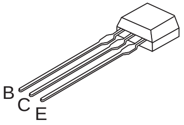
2SB0621AHA



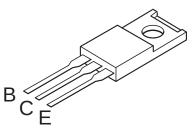
KRA102MTA
KRC102MTA
KRA110MTA
B1ACCF000063
KTC3199GRTA
B1AACF000063



B1AAGC000006

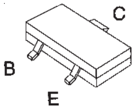


B1BACG000023
B1BCCG000002

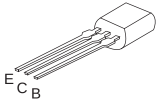


B1ABGC000005
KRA102STA
KRC101STA
KRC102STA
KRC103STA
B1GBCFGG0001
B1GDCFJJ0002
B1ABCE000016
B1ADCF000001

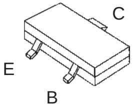
B1GBCFGH0001
B1GDCFGH0002
B1ABCF000011



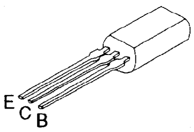
2SD0592ARA
2SD09650RA
KTA12710YTA
KTA1504GRTA
KTC32030YTA



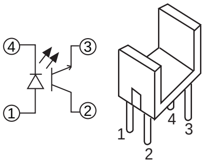
KRC119STA



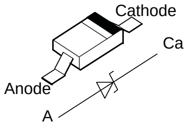
2SC3940ARA



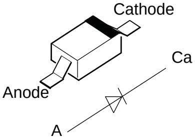
B3NAA0000068



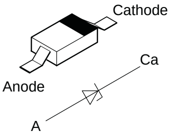
B0ACCK000005


Cathode
Ca
Anode
A

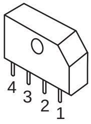
B0BC01000014
B0ACCE000003
B0BC6R700006


Cathode
Ca
Anode
A

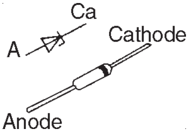
MAZ80560ML


Cathode
Ca
Anode
A

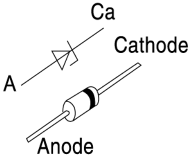
B0FBAM000009



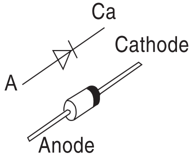
B0BA5R600016
B0BA9R600002
B0BA6R600008
B0BA01100004
B0BA8R200005
MTZJ15BTA


Ca
A
Cathode
Anode

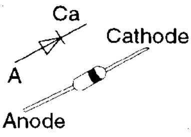
B0BA03000015


Ca
Cathode
A
Anode

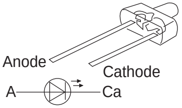
B0EAKM000117


Ca
Cathode
A
Anode

B0AACK000004
MA729TX
MA2C16500E

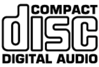

Ca
Cathode
A
Anode

B3ADA0000087
B3AAA0000487


Anode
Cathode
A
Ca

## NOTE on CDs

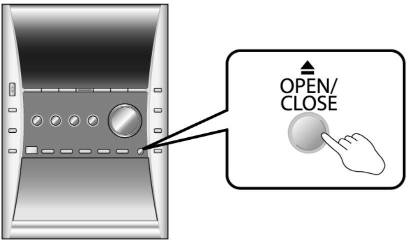
- This unit can access up to 99 tracks.
- Choose CD with this mark.

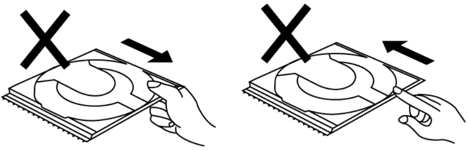


- This unit can play MP3 files and CD-DA format audio CD-R/RW that have been finalized.
- It may not be able to play some CD-R/RW due to the condition of the recording.
- Do not use irregular shaped disc.
- Do not use disc with labels and stickers that are coming off or with adhesive exuding from under labels and stickers.
- Do not attach extra labels or stickers on the disc.
- Do not write anything on the CD.

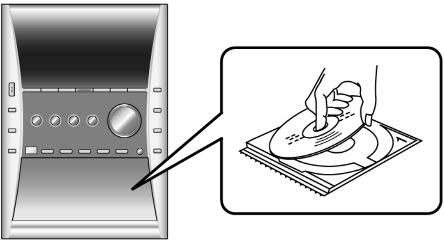
Not doing the following will cause damage to the unit.

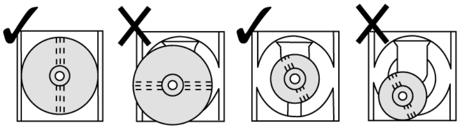
- "**GOOD BYE**" is displayed when the unit turns off. Remove the power plug after this display disappears.





- Always press [⏏ OPEN/CLOSE] to insert or remove a disc.
- Do not push or pull out the tray by hand as this will cause an accident.





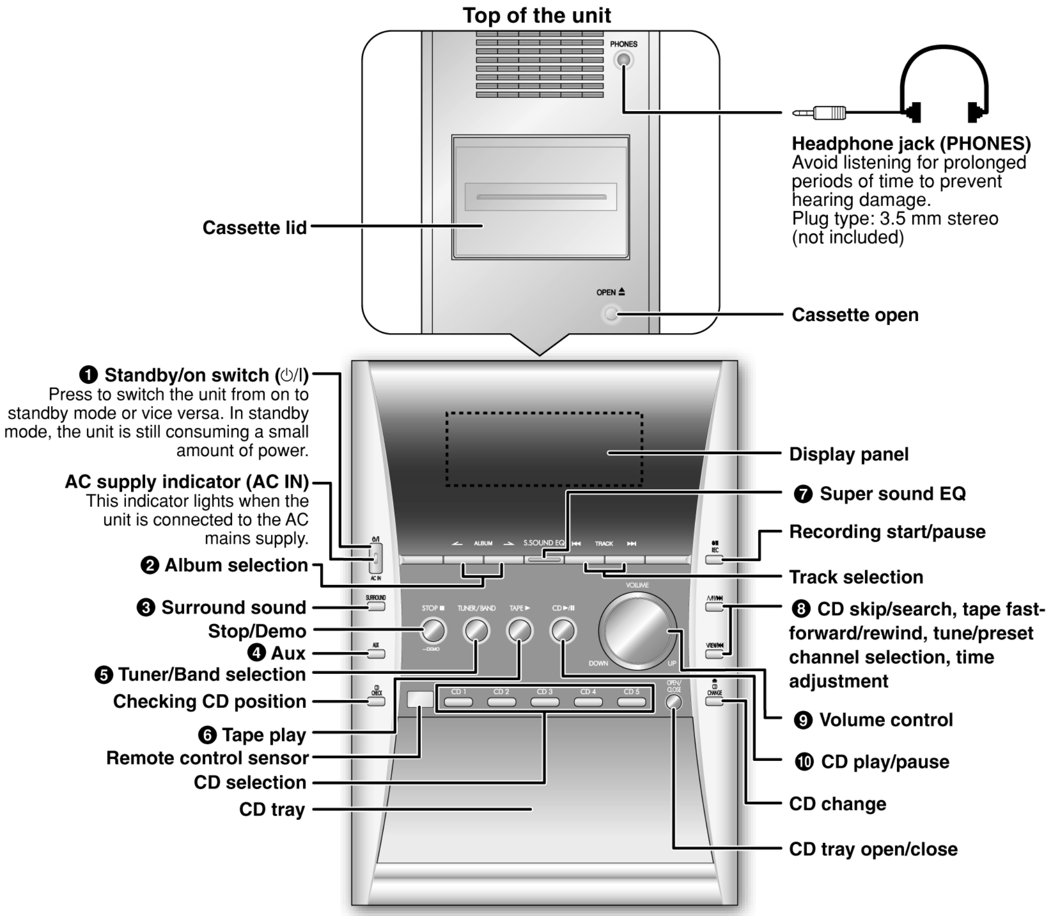
- Place the disc label-up in the center of tray.
- Insert only one disc into each tray.

## NOTE on MP3

- When "NOT MP3/ERROR1" appears on the display, an unsupported MP3 format is being played. The unit will skip that track and play the next one.
- Files are treated as tracks and folders are treated as albums.
- This unit can access up to 999 tracks, 255 albums and 20 sessions.
- Disc must conform to ISO9660 level 1 or 2 (except for extended formats).
- To play in a certain order, prefix the folder and file names with 3-digits numbers in the order you want to play them.

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

# Main unit


PHONES
OPEN ⏏
⏻/I
AC IN
ALBUM
S.SOUND EQ
⏮ TRACK ⏭
●/II REC
SURROUND
STOP ■
—DEMO
TUNER/BAND
TAPE ▶
CD ▶/II
VOLUME
DOWN
UP
AUX
CD CHECK
CD 1
CD 2
CD 3
CD 4
CD 5
OPEN/CLOSE
CD CHANGE
⋀/FF/⏭
⋁/REW/⏮

**Top of the unit**

**Cassette lid**

**Headphone jack (PHONES)**
Avoid listening for prolonged periods of time to prevent hearing damage.
Plug type: 3.5 mm stereo (not included)

**Cassette open**

**❶ Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

**AC supply indicator (AC IN)**
This indicator lights when the unit is connected to the AC mains supply.

**❷ Album selection**

**❸ Surround sound**

**Stop/Demo**

**❹ Aux**

**❺ Tuner/Band selection**

**Checking CD position**

**❻ Tape play**

**Remote control sensor**

**CD selection**

**CD tray**

**Display panel**

**❼ Super sound EQ**

**Recording start/pause**

**Track selection**

**❽ CD skip/search, tape fast-forward/rewind, tune/preset channel selection, time adjustment**

**❾ Volume control**

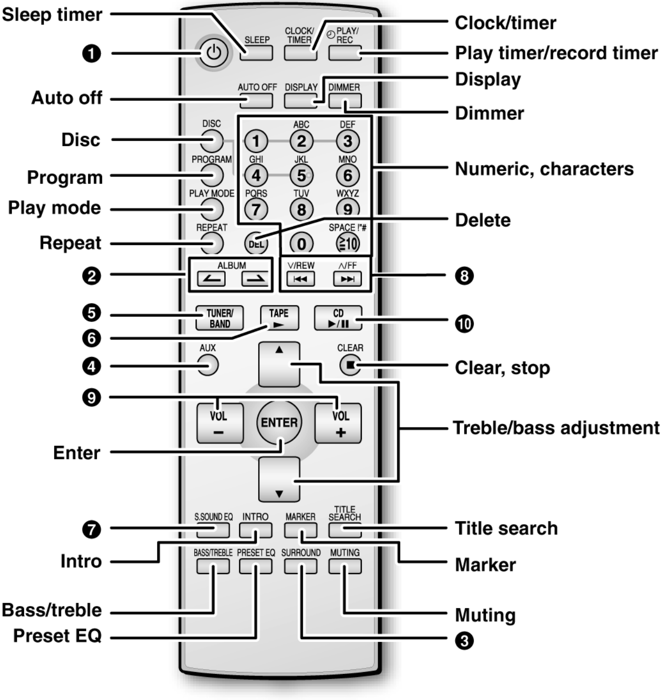
**❿ CD play/pause**

**CD change**

**CD tray open/close**

# Remote control

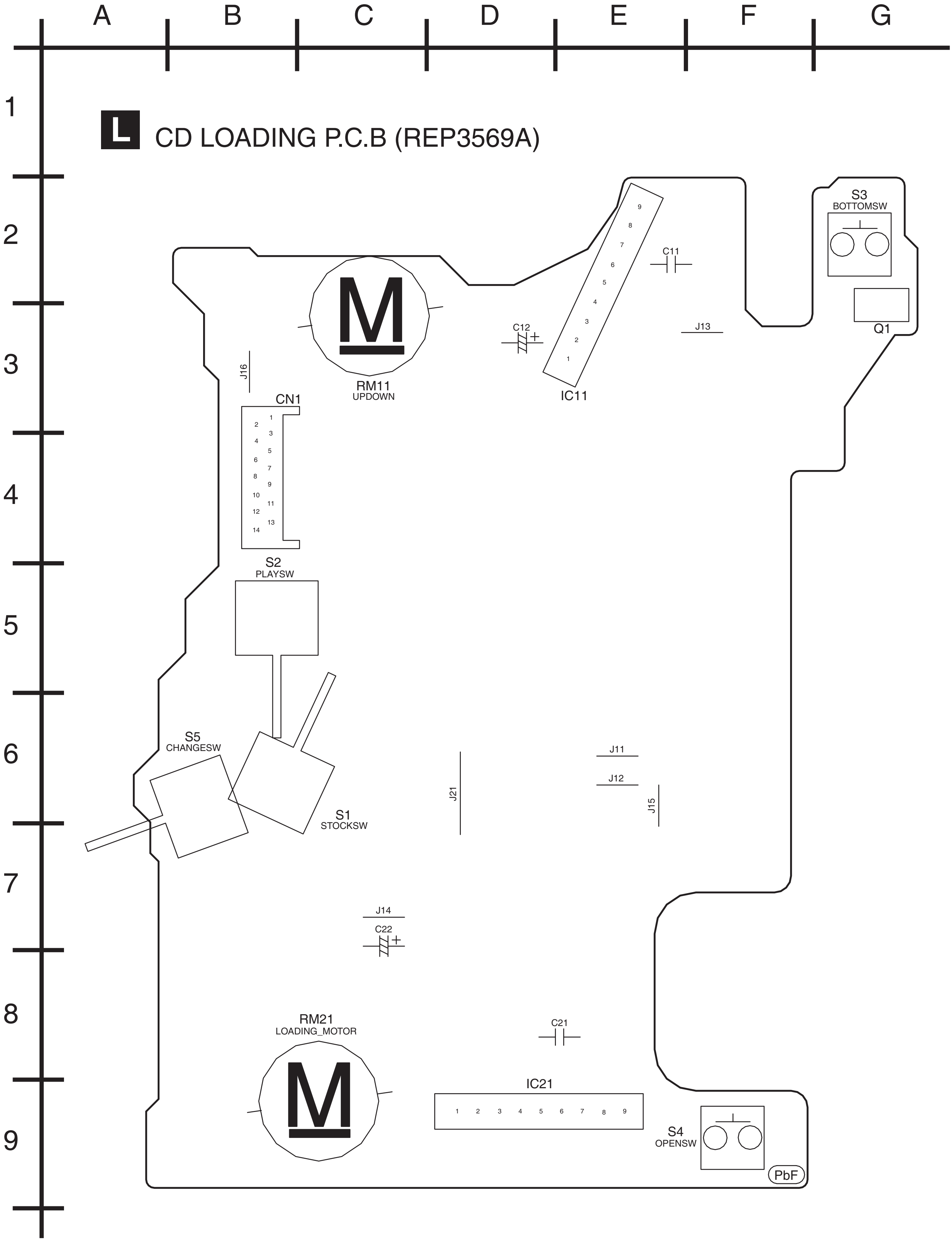
Buttons such as ❸ function the same as the controls on the main unit.


Sleep timer
❶
Auto off
Disc
Program
Play mode
Repeat
❷
❺
❻
❹
❾
Enter
❼
Intro
Bass/treble
Preset EQ
Clock/timer
Play timer/record timer
Display
Dimmer
Numeric, characters
Delete
❽
❿
Clear, stop
Treble/bass adjustment
Title search
Marker
Muting
❸
SLEEP
CLOCK/ TIMER
PLAY/ REC
AUTO OFF
DISPLAY
DIMMER
DISC
PROGRAM
PLAY MODE
REPEAT
ABC
DEF
GHI
JKL
MNO
PQRS
TUV
WXYZ
SPACE !"#
1
2
3
4
5
6
7
8
9
DEL
0
≥10
ALBUM
∨/REW
∧/FF
TUNER/ BAND
TAPE ►
CD ►/❚❚
AUX
CLEAR
VOL –
ENTER
VOL +
S.SOUND EQ
INTRO
MARKER
TITLE SEARCH
BASS/TREBLE
PRESET EQ
SURROUND
MUTING

| | |
|---|---|
| AUTO OFF | This function allows you to turn off the unit in **CDs or tape** mode only after left unused for 10 minutes.<br>• The setting is maintained even if the unit is turned off. |
| DIMMER | To dim the display panel. |
| MUTING | To mute the sound. |

- Press the button to activate.
- Press again to cancel.

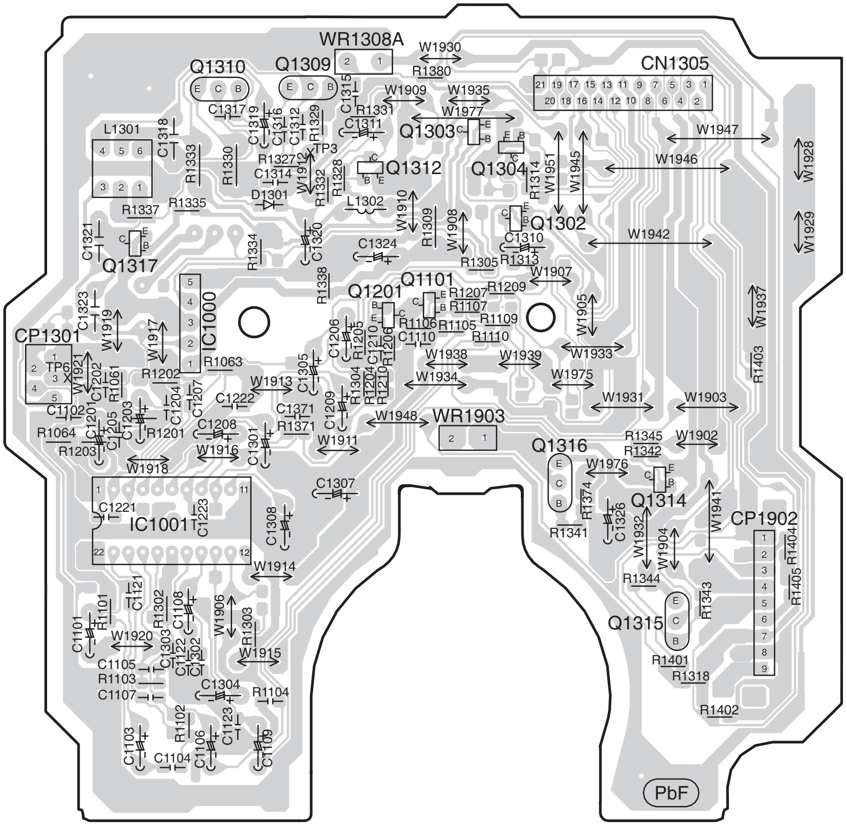
## L CD LOADING P.C.B (REP3569A)


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
M
RM11
UPDOWN
J16
CN1
C12
IC11
C11
J13
S3
BOTTOMSW
Q1
S2
PLAYSW
S5
CHANGESW
S1
STOCKSW
J21
J11
J12
J15
J14
C22
RM21
LOADING_MOTOR
M
C21
IC21
S4
OPENSW
PbF

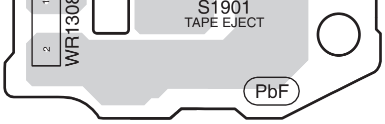
A B C D E F G

1 2 3 4 5 6 7 8 9

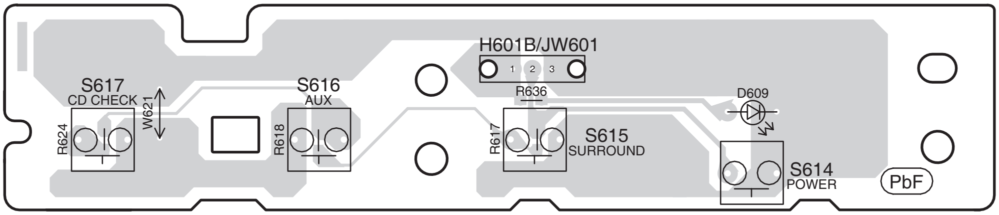
## G DECK P.C.B (REPV0016B)


WR1308A
Q1310
Q1309
W1930
R1380
CN1305
W1909
W1935
W1977
C1317
C1319
C1316
C1312
R1329
C1315
R1331
C1311
Q1303
Q1304
W1947
W1928
L1301
C1318
R1333
R1330
R1327
TP3
C1314
W1912
R1332
R1328
Q1312
D1301
W1951
W1945
R1314
W1946
R1337
R1335
L1302
W1910
R1309
W1908
Q1302
C1310
R1313
R1305
W1942
W1929
C1321
Q1317
C1320
C1324
R1334
R1338
Q1201
Q1101
R1207
R1209
R1107
W1907
R1106
R1105
R1109
R1110
C1110
W1905
W1937
C1323
W1919
W1917
IC1000
CP1301
TP6
W1921
C1202
R1061
R1202
R1063
C1206
R1205
C1210
R1206
R1204
R1304
R1210
W1938
W1939
W1933
R1403
C1305
W1913
W1934
W1975
W1931
W1903
C1102
C1201
C1205
C1203
C1204
C1207
C1222
C1209
C1371
R1371
W1948
WR1903
R1064
R1201
C1208
W1916
C1301
W1911
Q1316
R1345
R1342
W1902
R1203
W1918
W1976
Q1314
C1307
IC1001
C1221
C1223
C1308
R1374
C1326
W1941
CP1902
R1341
W1932
W1904
R1404
W1914
R1344
R1405
C1121
R1101
C1101
R1302
C1108
W1906
R1303
R1343
Q1315
W1920
C1303
C1122
C1302
W1915
C1105
R1103
C1107
C1304
R1104
R1401
R1318
R1402
R1102
C1123
C1103
C1104
C1106
C1109
PbF

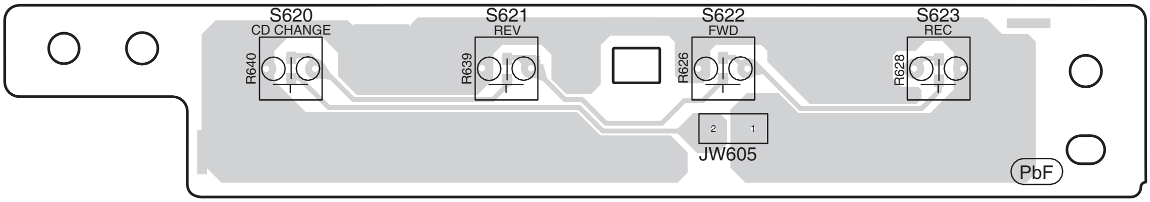
## I TAPE EJECT P.C.B (REPV0016B)


WR1308A
S1901
TAPE EJECT
PbF

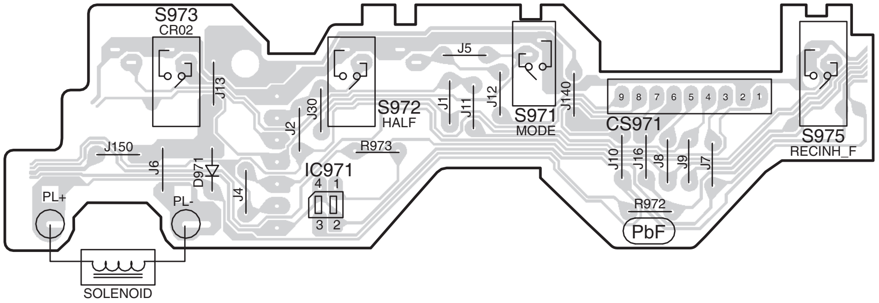
## E POWER IN P.C.B (REPV0037B)


H601B/JW601
1
2
3
R636
D609
S617
CD CHECK
W621
R624
S616
AUX
R618
R617
S615
SURROUND
S614
POWER
PbF

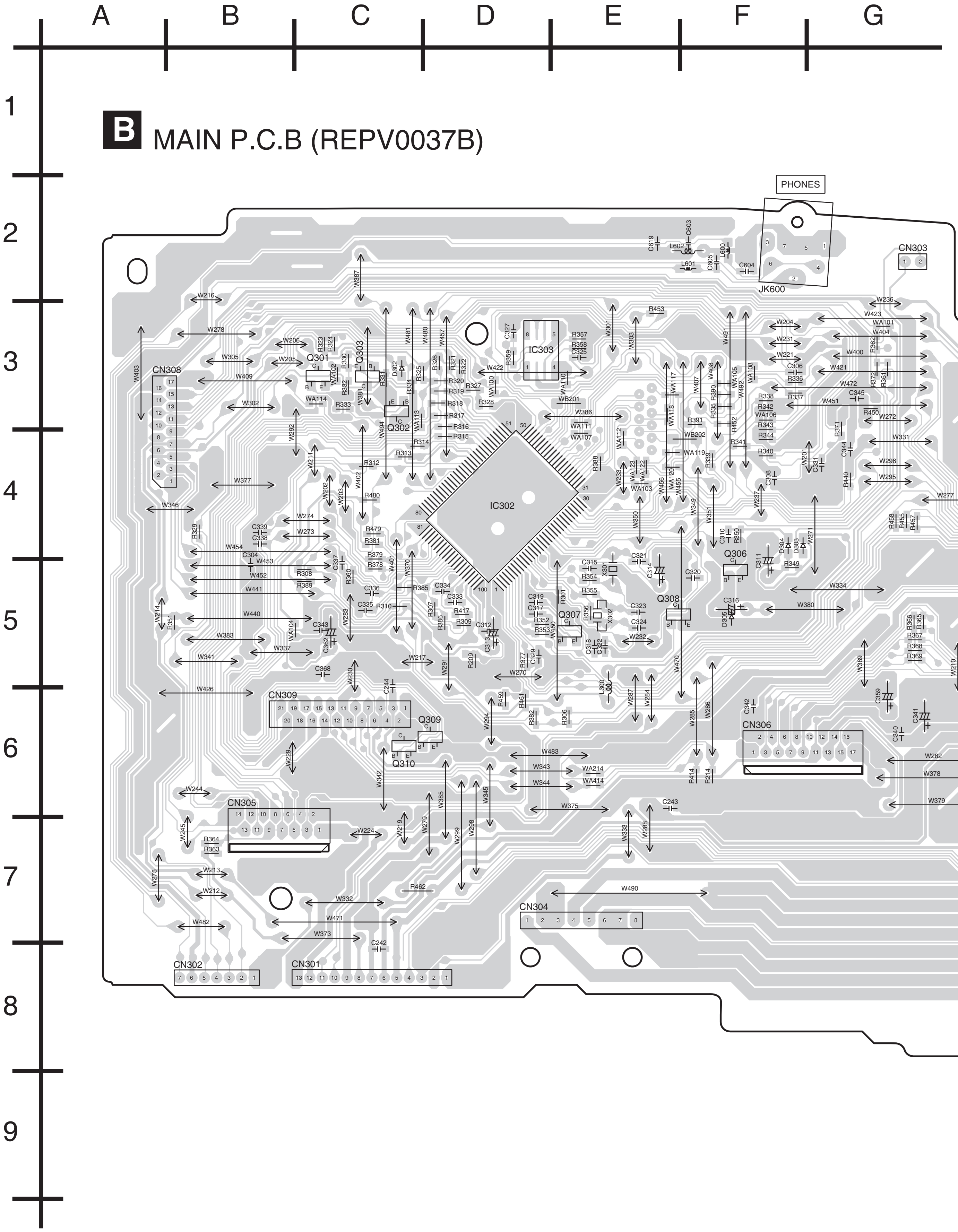
## F FUNCTION P.C.B (REPV0037B)

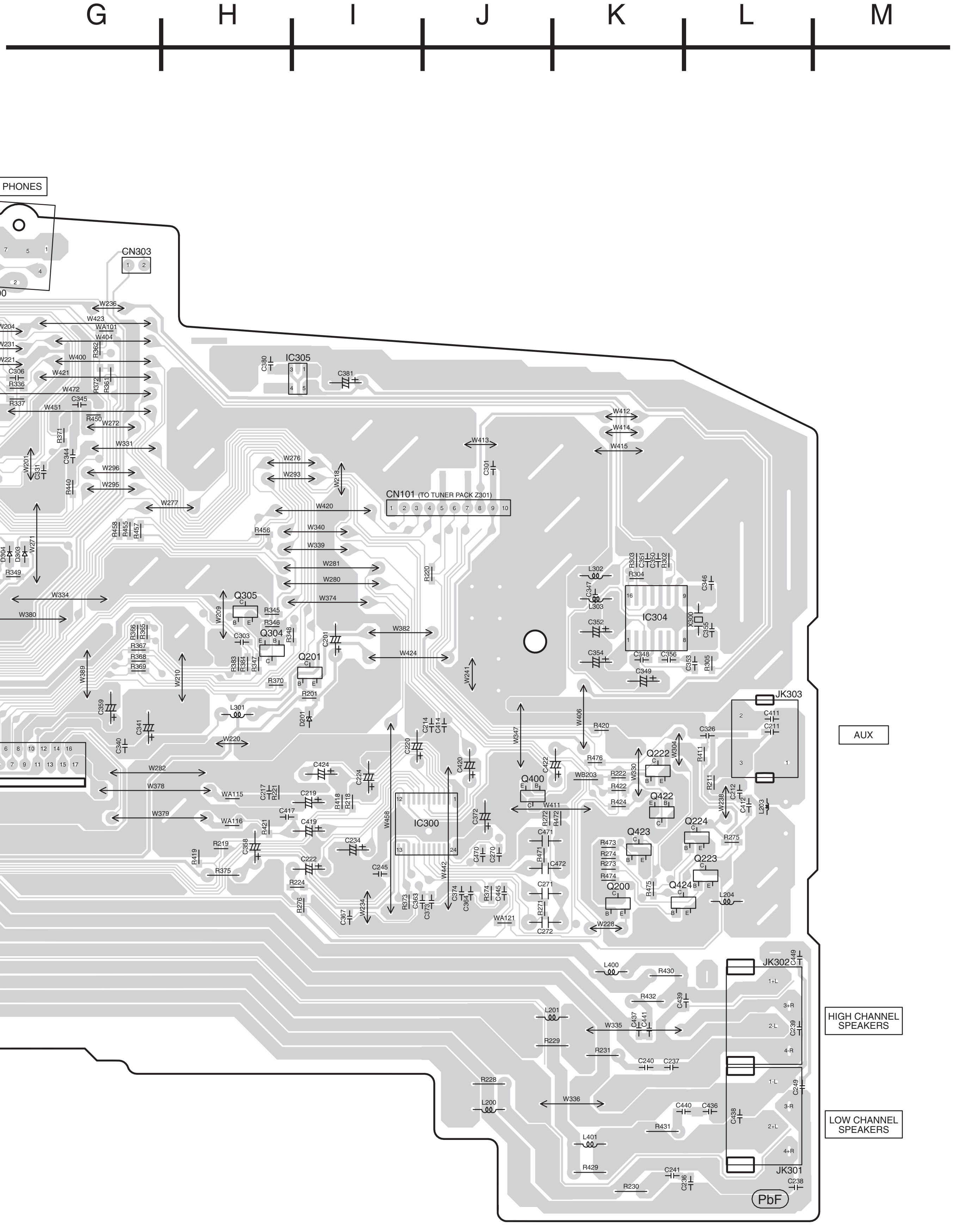

S620
CD CHANGE
R640
S621
REV
R639
S622
FWD
R626
S623
REC
R628
2
1
JW605
PbF

## H DECK MECHANISM P.C.B (REPX0321H)


S973
CR02
J13
J5
J30
J2
S972
HALF
J1
J11
J12
S971
MODE
J140
9 8 7 6 5 4 3 2 1
CS971
S975
RECINH_F
J150
J6
D971
J4
R973
IC971
4 1
3 2
J10
J16
J8
J9
J7
R972
PbF
PL+
PL-
SOLENOID

## **B** MAIN P.C.B (REPV0037B)

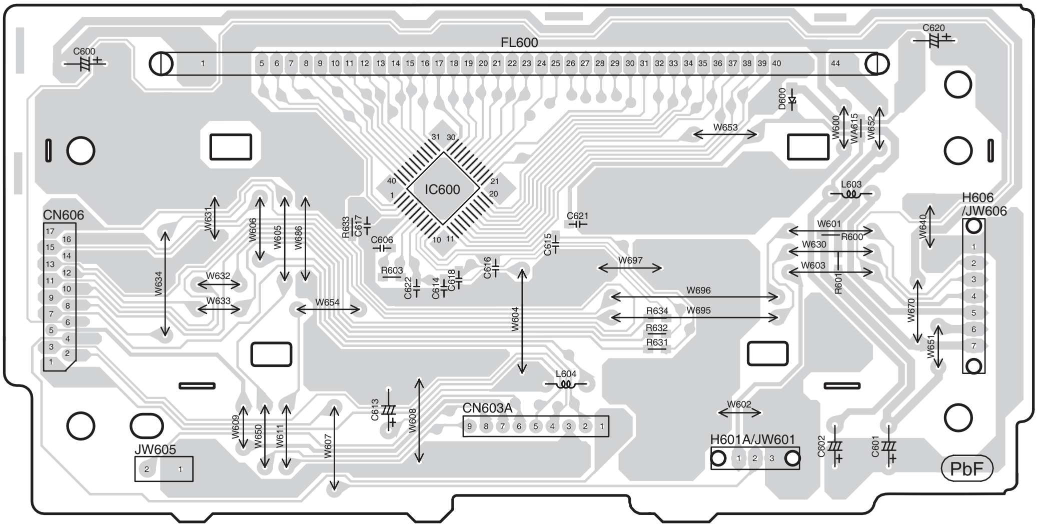

A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
PHONES
JK600
CN303
CN308
CN309
CN305
CN302
CN301
CN304
CN306
IC302
IC303
Q301
Q302
Q303
Q306
Q307
Q308
Q309
Q310
D302
D303
D304
D305
X301
X302
L300
L600
L601
L602
C603
C604
C605
C619
W403
W216
W278
W305
W206
W205
W409
W302
W292
W211
W377
W346
W454
W453
W452
W441
W440
W383
W337
W341
W426
W214
W244
W245
W213
W212
W275
W482
W332
W471
W373
W387
W481
W480
W457
W422
W301
W303
W386
W494
W402
W401
W370
W202
W203
W274
W273
W283
W217
W291
W270
W230
W229
W342
W219
W224
W279
W385
W299
W298
W345
W294
W483
W343
W344
W375
W490
W333
W288
W287
W284
W285
W286
W470
W349
W351
W350
W233
W232
W491
W492
W408
W407
W236
W423
W204
W231
W221
W404
W400
W421
W472
W451
W272
W331
W296
W295
W277
W201
W237
W271
W334
W380
W389
W210
W282
W378
W379
W456
W455
W450
WA100
WA101
WA102
WA103
WA104
WA105
WA106
WA107
WA108
WA110
WA111
WA112
WA113
WA114
WA117
WA118
WA119
WA120
WA122
WA123
WA214
WA414
WB201
WB202
R453
R357
R358
R359
R323
R324
R330
R331
R332
R333
R334
R325
R326
R321
R322
R320
R319
R318
R317
R316
R315
R314
R313
R312
R327
R328
R480
R479
R381
R379
R378
R360
R308
R389
R385
R310
R307
R386
R417
R309
R209
R377
R301
R352
R353
R354
R355
R356
R306
R382
R461
R459
R462
R329
R351
R364
R363
R388
R391
R390
R335
R339
R452
R341
R338
R342
R343
R344
R340
R336
R337
R362
R372
R361
R371
R450
R440
R458
R455
R457
R349
R350
R366
R365
R367
R368
R369
R414
R214
C327
C325
C306
C345
C344
C331
C308
C310
C311
C316
C314
C320
C321
C323
C324
C315
C319
C317
C318
C322
C329
C312
C313
C334
C333
C336
C335
C337
C339
C338
C304
C343
C362
C368
C244
C242
C243
C342
C359
C341
C340
100
1
30
31
50
51
80
81


G
H
I
J
K
L
M
PHONES
CN303
IC305
C380
C381
CN101 (TO TUNER PACK Z301)
W412
W414
W415
W413
C301
IC304
L302
L303
C347
C346
X300
C355
C352
C354
C348
C356
C349
C353
R305
R303
R304
Q305
Q304
Q201
R201
D201
L301
IC300
Q400
Q222
Q422
Q423
Q224
Q223
Q200
Q424
L203
L204
JK303
AUX
C411
C211
C326
R411
R420
R476
WB203
W411
C471
C472
C271
C272
L400
R430
R432
C439
L201
W335
C437
C441
R229
R231
C240
C237
R228
L200
W336
C440
C436
C438
R431
L401
R429
C241
C236
R230
JK302
1+L
3+R
2-L
4-R
C449
C239
C249
C238
JK301
HIGH CHANNEL SPEAKERS
LOW CHANNEL SPEAKERS
PbF
W236
W423
WA101
W404
W400
W421
W472
W451
W204
W231
W221
C306
R336
R337
C345
R450
W272
W331
W296
W295
W277
W201
C331
R371
C344
R440
W271
D304
D303
R349
W334
W380
R362
R372
R361
R458
R455
R457
W276
W293
W218
W420
R456
W340
W339
W281
W280
W374
R220
W209
R345
R346
C303
R348
C201
R366
R365
R367
R368
R369
R383
R384
R347
R370
W382
W424
W241
W389
W210
C359
C341
C340
W220
W282
W378
W379
WA115
WA116
C217
R221
C424
C219
C417
C419
R418
R218
R421
R219
C358
R419
R375
C224
C234
C222
C245
R224
R276
C367
W234
C220
C214
C414
W458
C420
C372
W442
R373
C363
C373
C374
C364
R374
C445
C470
C270
WA121
W347
C422
W406
R272
R472
R471
R271
W330
R222
R422
R424
W304
R473
R274
R273
R474
R475
R275
W238
C212
C412
R211
W228

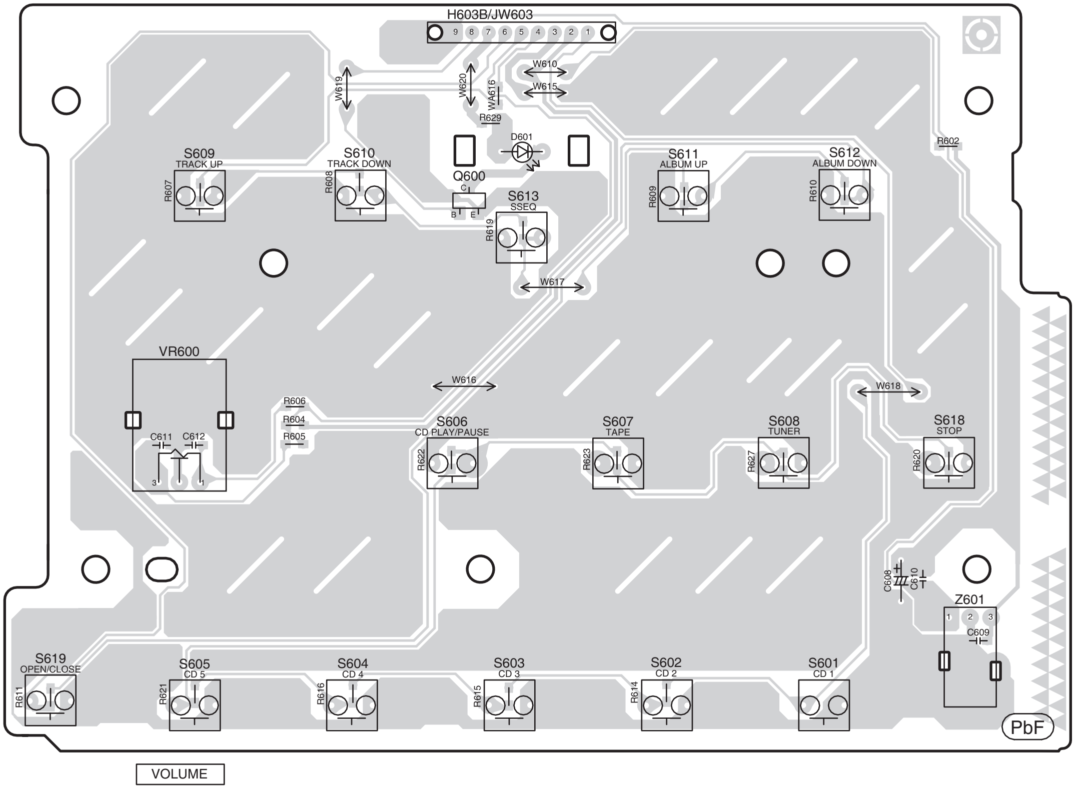
A B C D E F G

1 2 3 4 5 6 7 8 9

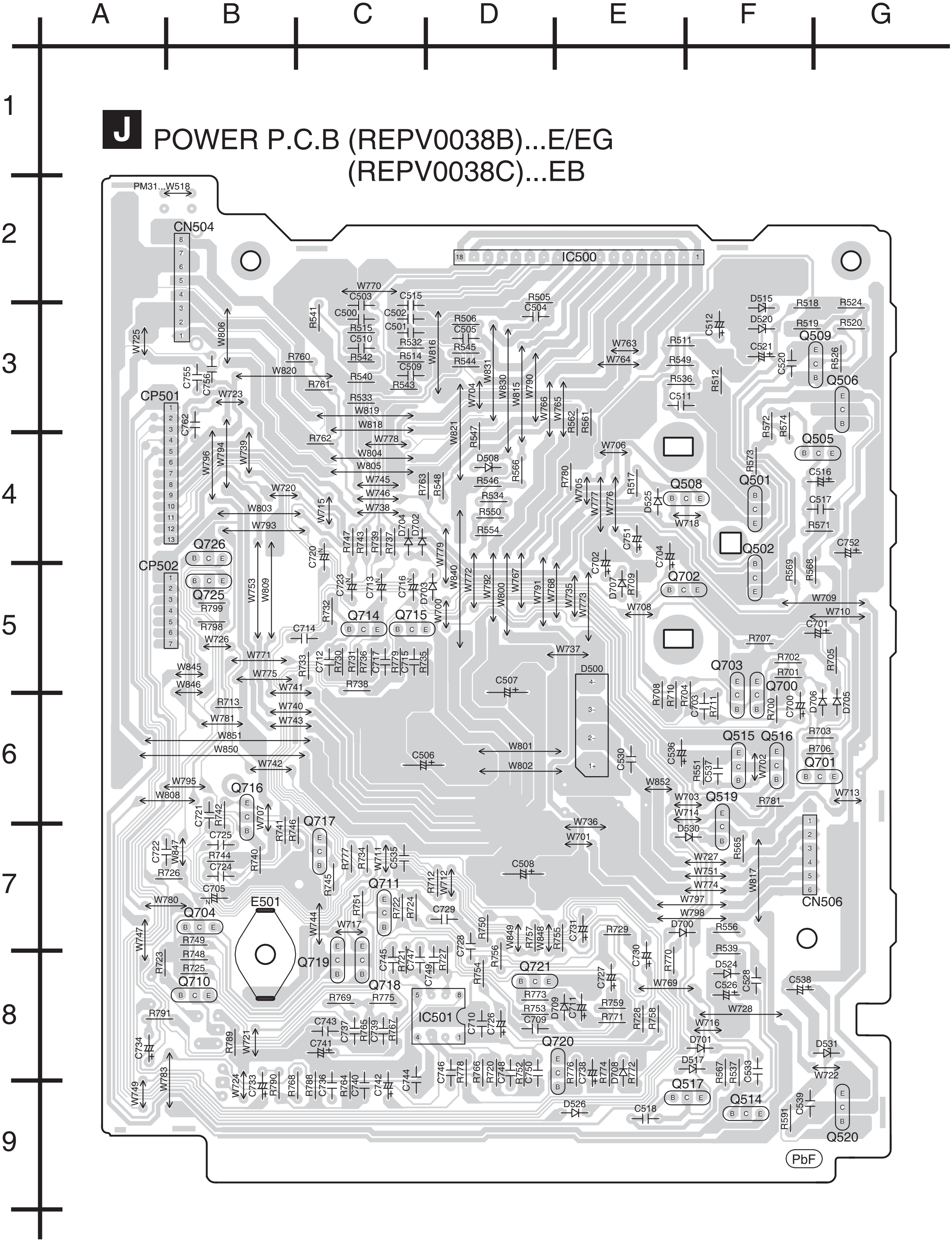
## C MAIN CONTROL P.C.B (REPV0037B)


FL600
1 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 44
C600
C620
D600
W653
W600
WA615
W652
IC600
31 30
40 1
21 20
10 11
L603
H606 /JW606
1 2 3 4 5 6 7
CN606
17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
W631
W606
W605
W686
R633
C617
C606
C621
C615
W601
R600
W630
W603
R601
W640
W634
W632
W633
W654
R603
C622
C614
C618
C616
W697
W696
R634
W695
R632
R631
W604
W670
W651
L604
C613
W608
CN603A
9 8 7 6 5 4 3 2 1
W609
W650
W611
W607
W602
H601A/JW601
1 2 3
C602
C601
JW605
2 1
PbF

## D PANEL P.C.B (REPV0037B)


H603B/JW603
9 8 7 6 5 4 3 2 1
W610
W615
W619
W620
WA616
R629
D601
Q600
C B E
S609 TRACK UP
R607
S610 TRACK DOWN
R608
S613 SSEQ
R619
S611 ALBUM UP
R609
S612 ALBUM DOWN
R610
R602
W617
VR600
C611
C612
3 1
R606
R604
R605
W616
W618
S606 CD PLAY/PAUSE
R622
S607 TAPE
R623
S608 TUNER
R627
S618 STOP
R620
C608
C610
Z601
1 2 3
C609
S619 OPEN/CLOSE
R611
S605 CD 5
R621
S604 CD 4
R616
S603 CD 3
R615
S602 CD 2
R614
S601 CD 1
PbF
VOLUME

**J** POWER P.C.B (REPV0038B)...E/EG
(REPV0038C)...EB


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
PM31...W518
CN504
IC500
18
1
W770
C503
C515
C500
C502
C501
R541
R515
C510
R542
R532
R514
C509
R540
R543
R505
C504
R506
C505
R545
R544
W816
W831
W830
W815
W790
W766
W765
R562
R561
W763
W764
R511
R549
R536
C511
R512
C512
D515
D520
C521
C520
R518
R524
R519
R520
Q509
R526
Q506
W725
W806
R760
W820
R761
C755
C756
W723
CP501
C762
W796
W794
W739
R533
W819
W818
R762
W778
W804
W805
W745
W746
W738
W821
R547
W704
D508
R566
R546
R534
R550
R554
R763
R548
W720
W803
W793
W715
R780
W705
W777
W776
R517
D525
Q508
W706
W718
R572
R574
Q505
R573
Q501
C516
C517
R571
Q502
C752
R569
R568
Q726
Q725
CP502
R799
R798
W753
W809
C720
R747
R743
R739
R737
D704
D702
W779
C723
C713
C716
D703
W840
W772
W792
W800
W767
W791
W768
W735
W773
C702
D707
R709
C751
C704
Q702
W708
W709
W710
C701
R732
W700
Q714
Q715
C714
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W846
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C712
R730
R731
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C717
R779
C715
R735
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W740
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W781
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W850
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Q700
R708
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R704
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R711
R700
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D706
D705
C506
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Q701
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C721
R742
W707
R741
R746
Q717
C725
C722
W847
R744
C724
R740
R726
R777
R734
W711
C535
W736
W701
W703
W714
D530
Q519
R565
R781
W713
W727
W751
W774
W817
CN506
1
2
3
4
5
6
C508
C705
W780
Q704
E501
R745
Q711
R751
R722
R724
R712
W712
C729
W744
W717
W797
W798
D700
R556
W747
R749
R748
R725
Q710
R723
Q719
Q718
C745
R721
C747
C749
R727
C728
R750
R754
R756
W849
R757
W848
R755
C731
R729
C730
R770
R539
D524
C526
C528
C538
Q721
C727
W769
R773
R753
D709
C711
C709
R759
R771
R728
R758
W728
W716
R791
C734
W783
W749
R789
W721
R769
R775
IC501
5
8
4
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C743
C737
R765
C739
R767
C741
C710
C726
C733
R790
W724
R768
R788
C736
R764
C740
C742
C744
C746
R778
R766
R720
C748
R752
C750
Q720
R776
C738
R774
D708
R772
D701
D517
D526
C518
Q517
R567
R537
C533
Q514
D531
W722
R591
C539
Q520
B
C
E
PbF